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SALARIES OF SCIENTISTS • ENGINEERS AND TECHNICIANS

A Summary of Salary Surveys

TWELFTH EDITION

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INTRODUCTION

Salary surveys are conducted by a number of organizations, including agencies and departments of the federal government, professional scientific and engineering organizations, educational associations, magazine publishers, and other professional and trade associations. While some surveys deal directly with salaries of scientists and engineers, others cover much broader occupational categories. Most salary surveys conducted by professional scientific and engineering societies cover only their membership. However, since such societies generally represent the majority of the population in their particular discipline, the results may be generalized to these professional populations. Some smaller salary surveys in specific disciplines are included for comparative purposes, as are surveys in occupations not specifically science and/or engineering.

Although most of the salary data presented in this report are available from the original sources, this compilation brings together the information from a variety of sources both for purposes of comparison and for easier accessibility.

For a number of reasons, exact correlation of results of different surveys is generally not possible without access to the original data, and may not be even then because of the different methodologies employed when carrying out the survey and the differing populations surveyed. The statistical bases used in survey reports include medians, means, percentiles and ranges of one of these, which are not directly comparable. In addition to the "snapshot" characteristics of surveys, which provide information as of any given date, the time periods covered by the surveys include calendar year, fiscal year, academic year, and quarterly segments starting at various points in the year. The base and time period for each table is noted with the table and/or in the introductory statement for the section in which it appears.

Where comparisons of similar data are possible, some apparent discrepancies appear. Although no attempt has been made to evaluate the relative reliability of the data, the number of people included in the statistics presented is given when known. In some cases, the number of respondents listed within a table will not match totals for all fields or all groups, either because some areas not applicable to science and engineering have been omitted, or because only selected variables have been included in the table.

Generally, only the most current salary information is included from each data source. However, some trend data, usually limited to the survey immediately preceeding the current survey, is included for comparison. Long trend salary information may be examined by referring to earlier editions of this publication, which has been published biennially since 1964. Copies of some of the first eleven editions of **SALARIES OF SCIENTISTS, ENGINEERS AND TECHNICIANS - A SUMMARY OF SALARY SURVEYS** are available from the **Scientific Manpower Commission.**

The source of the data is given at the top of each table. Full bibliographic references for each data source begin on page 182. A cross-index beginning on page 184 and a detailed Table of Contents provide rapid access to specific salary information.

This report was prepared by Eleanor Babco, Associate Director of the Scientific Manpower commission. Special thanks is extended to Barbara Willard as well as to the SMC staff for their invaluable assistance.

STARTING SALARIES

The **College Placement Council SALARY SURVEY - A STUDY OF 1984-85 BEGINNING OFFERS** reports starting salary data based on job offers, not acceptances, made to graduating college students at all degree levels in selected curricula and graduate programs during the recruiting period September 1, 1984 to June 7, 1985. Data are submitted throughout the year by 187 placement offices at 163 participating colleges and universities in the United States.

The final report of the 1984-85 recruiting year found both job offers and starting salaries up modestly over the previous year. While the number of job offers reported at the bachelor's degree level rose 4.9% from 42,393 to 44,479, the increase was not evenly distributed. Engineering disciplines fared best, with nearly all of them recording gains. Among the other disciplines, some did better and others slightly worse than last year. However, the increase in starting pay was more across-the-board. Average salaries for most of the 25 disciplines surveyed rose from 3 to 5 percent. Petroleum engineering graduates continued to attract the highest salary average, up 4.8% over last year, to $30,996. Next came chemical engineering, up 3.7% to $28,428, and electrical engineering, up 3.2% to $27,396. The computer science and social sciences categories produced the biggest surprises in the 1984-85 recruiting year. There were only a handful more offers in computer science this year and a 1.8% increase in average salary with most of that occurring at the end of the year. Computer science graduates received average starting salary offers of $29,984. The social sciences other than economics recorded a slightly higher-than-average salary increase (6.4%) bringing the average yearly salary to $18,540. Although chemistry graduates received salaries averaging $22,764, up 8.0% over last year, the number of offers dropped 12.4%. Biological science graduates continued to receive the lowest salary offers in the sciences category, $17,196, and for the first time, the lowest average in any of the 25 categories surveyed. The three business disciplines had varying degrees of success. Accounting and marketing received a few more offers than last year and registered salary increases of slightly more than 4% to $20,364 and $18,576 respectively. Business graduates received considerably fewer offers this year, but drew starting salaries 5.2% higher than last year, averaging $19,632 (Table 1).

While men accounted for the majority of job offers, women recorded a much bigger increase in the number of job offers since July 1984. Job offers to women soared 10%, compared iwth only 3% for men. This difference was particularly evident in the accounting and computer science categories, where women achieved sizable increases while men experienced losses in the number of offers. But not all the news was good for women. While they drew the same starting salary in accounting ($20,376), they fell short in computer science with a $24,660 average versus the $25,224 average for men. Salary offers to women in engineering were comparable to those made to men. The biological sciences, showing the lowest average offers in any field, also showed one of the widest gaps between men and women, $18,312 and $16,452 respectively. The health professions, with a differences of $3,768 in annual offers to men and women, is the largest. (Table 2).

By functional area, the bulk of the offers to both men and women were for engineering and accounting/auditing jobs. The salary offer was also the highest in engineering - $2,260/month for men and $2,286/month for women. Next highest average dollar offers were made to graduates having a technical/scientific degree and working in sales - $2,180 to men and $2,131 to women - followed by those working in EDP programming and systems work (Table 3).

At the master's degree level, no clear pattern emerged. Some graduate programs reported more job offers and salary increases since July 1984; others had significantly

fewer offers and drops in salary. Electrical engineering headed up the winner's column, with the largest increase in number of offers and a 5.5% gain in salary to $32,724. Other winners were civil and mechanical engineering and geology. All recorded more offers as well as salary increases of 3.8% to 6.1%. MBA's topped the losers' list, experiencing a significant decline in number of job offers and little or no movement in starting salaries since July 1984 (Table 4).

At the doctoral level, average top dollar offers went to electrical and computer engineering graduates, up 3.3% to $42,504. Salary offers to civil engineering doctoral graduates dropped 19.3% to $30,084 (Table 5).

The general upward trend in starting salaries of new college graduates continues, but very slowly, according to the annual **1985 COLLEGE RECRUITING REPORT** by **Abbott, Langer & Associates.** Graduates of junior/community colleges with engineering-related degrees averaged 63% of the starting salary of comparable bachelor's graduates, with technical-related degrees averaging 63% and non-technical degrees averaging 69% of the bachelor's level. Two-year graduates receiving their degrees in mechanical technology recorded the highest average salary, $1,510 per month, while those in business administration received the lowest average salary of $948 per month (Table 6).

New baccalaureate graduates in engineering had average starting salaries of $2,248 per month, up only 1.9% over 1984. By subdiscipline, chemical engineering graduates at $2,325 per month received the highest averages while civil engineers reported the lowest at $1,982. In the physical, biological, earth and mathematical sciences, bachelor's degree graduates in geology reported the highest averages - $2,223 per month - and chemistry graduates the lowest - $1,894. At the low end of the salary scale were baccalaureate graduates in education at $1,444 per month and liberal arts graduates at $1,476 (Table 7).

At the master's level, engineering graduates averaged $2,539 per month, up 1.3% over 1984, with electrical engineering master's reporting the highest average of $2,629 per month and civil engineers the lowest - $2,318 per month. In the math and science catagory, M.S. graduates in mathematics and statistics reported the highest monthly salaries - $2,471 (Table 8). MBA graduates with engineering undergraduate degrees averaged $2,747 per month while those with an undergraduate degree in accounting averaged only $2,386 per month (Table 9).

At the doctoral level, electrical engineering graduates received the highest salary averages of $3,615 per month and chemistry graduates the lowest of the disciplines studied at $3,150 per month (Table 10). Starting salaries for bachelor's graduates by discipline and type of industry are shown in Tables 11 and 12.

Continued improvement is reflected in the job market for 1984-85 college graduates with employers indicating that hiring quotas in their organizations have increased by 9.2% for bachelor's graduates according to **RECRUITING TRENDS 1984-85** by **John Shingleton** of **Michigan State University.** The largest increases in demand will be for electrical engineers, up 8.1%; mechanical engineers, up 5.1%; computer science majors, up 5.0%; and accountants, up 3.8%. Salary offers for 1984-85 bachelor's degree graduates are expected to increase 3.7%, compared with 2.8% for 1983-84 graduates. Highest starting salary offers are expected to go to electrical engineers at $28,086, followed by metallurgy/materials science engineers at $28,012. The lowest starting salary offers were anticipated for those graduates in arts and letters and human ecology at $15,124 and $14,827 respectively. Overall, bachelor's graduates received starting salary offers of $20,470, master's graduates $23,868 and doctoral graduates $26,808 (Table 13).

The **NORTHWESTERN ENDICOTT REPORT 1985** is the 39th annual survey of employment trends for college and university graduates in business and industry. Data from 250 well-known business and industrial concerns in 29 states and Washington, DC, representing all major regions of the nation, indicate more job offers and higher starting salaries for 1984-85 college graduates. For bachelor's graduates, the biggest increase in job offers will be in economics and finance, up 65%, and business administration, up 33%. Engineering graduates also will benefit, with openings up 18% at the bachelor's level. Bachelor's level engineers continue to receive the highest average starting salary - $2,240 per month, followed by chemistry graduates at $2,018. At the low end of the scale are liberal arts graduates at $1,569 per month (Table 14).

Starting salaries for inexperienced chemists have varied considerably from year to year. At the baccalaureate level, the median salary rose 3% in 1980 and 18% in 1981, but decreased 4% in 1982 and 6% in 1983. During 1984, it rose 13%. Median monthly starting salaries for men and women bachelor's degree chemists from 1961 to 1985 are shown in Table 15. Although the gap between starting salaries for men and women narrowed in 1984, in 1985, men received salaries that were 10.0% higher than did women - $1,667 compared to $1,500. Starting salaries for M.S. chemists rose 13% to $27,000, while the median for new Ph.D. chemists is up 4% to $36,000, according to the **American Chemical Society's STARTING SALARIES 1984** and **1985.**

Where a chemist or chemical engineer works has an effect on starting salary. Regardless of degree level or sex, chemists and chemical engineers earn the most working in private industry and the least working in academic institutions (Tables 16 and 17).

Other factors affecting starting salaries for chemists and chemical engineers are area of specialization and years of professional experience. The highest average starting salary for master's degree chemists is in general chemistry while doctoral degree organic chemists reported the highest salaries - $28,500 and $34,800 respectively (Table 18). Median annual salaries of chemists and chemical engineers by professional experience are shown in Table 19.

The geographic region of the country had some bearing on starting salaries for chemists and chemical engineers at all degree levels. B.S. chemists working in the West North Central and East North Central regions earned the most, while B.S. chemical engineers employed in the West South Central reported the highest average starting salaries (Table 20). Regardless of degree level, male chemists and chemical engineers reported higher starting salaries than did women in 1984 (Table 21). However, for 1985, median starting salaries of men and women employed in industry are quite similar, with women chemical engineers at the M.S. level reporting higher salaries than their male counterparts (Table 22). Chart 1 shows median annual salaries of inexperienced chemists by degree level from 1975 to 1985.

Starting salaries of industrial chemists increased substantially at all degree levels, according to the sixth annual salary survey by **INDUSTRIAL CHEMICAL NEWS.** Salaries for B.S. chemists were up 12.0%, for M.S. chemists, up 11.2% and for Ph.D. chemists, up 10.6% (Table 23).

Industry continued to pay the highest median salary to new physics degree recipients regardless of degree level, according to the **1983-84 SURVEY OF PHYSICS AND ASTRONOMY BACHELOR'S DEGREE RECIPIENTS** and **1983-84 GRADUATE STUDENT SURVEY** by the **American Institute of Physics** (Tables 24 and 25).

The 1984 annual **SALARY SURVEY FOR NEW RECIPIENTS OF DOCTORATES** by the **American Mathematical Society** found that business and industry continued to pay the highest starting salaries and academic institutions the lowest to new doctorates in mathematics (Table 27). Regardless of type of employer or type of activity, with the exception of teaching or teaching and research for 12 months, women received lower starting salaries than men (Table 26).

Robert Half Inc. has been conducting a study of **PREVAILING FINANCIAL AND DATA PROCESSING STARTING SALARIES** since 1950. The 1985 survey finds that salaries in data processing are up 5.4% to record levels based on an industry-wide analysis of thousands of position requests received by **Robert Half** offices throughout the U.S. Generally, salaries paid to data processing personnel are higher in larger companies than in medium size companies. By position, data base administrators/managers in large companies reported the largest salary increases (9.9%) while systems programmers in medium size companies reported the lowest (1.5%) (Table 28). Average starting salary ranges for data processing personnel in small companies are reported in Table 29.

The sixteenth annual **NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES**, conducted by the **Battelle Columbus Laboratories** for the **U. S. Department of Energy**, finds that engineers continue to lead all other disciplines in highest starting salaries regardless of degree level in 1984 (Table 30). Those bachelor's degree engineers working in materials engineering received the highest starting salaries - $2,292 per month while those working in metallurgical engineering recorded the lowest - $1,600 per month (Table 31).

The **U. S. Department of Labor's OCCUPATIONAL OUTLOOK HANDBOOK** includes information on starting salaries as well as estimates of the number of people employed in various fields. The most recent salary and employment information in selected scientific and engineering fields is summarized in Table 32.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1984-85 Beginning Offers, Formal Report, No. 3, July 1985.

TABLE 1

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO INEXPERIENCED BACHELOR'S DEGREE CANDIDATES BY CURRICULUM, JULY 1984 AND JULY 1985

CURRICULUM	No. Offers		Average $ Offers		Percent Change in $ offers
	1985	1984	July 1985	July 1984	July 1984
BUSINESS					
Accounting	6,637	6,459	$1,697	$1,627	4.3%
Business - General (includes Management)	3,627	4,249	1,636	1,555	5.2
Marketing & Distribution	1,955	1,677	1,548	1,485	4.2
ENGINEERING					
Aeronautical	643	406	2,230	2,153	3.6
Chemical	2,263	2,096	2,369	2,285	3.7
Civil**	1,383	1,164	1,969	1,897	3.8
Electrical (including Computer Engineering)	10,969	10,330	2,283	2,213	3.2
Geological	76	67	2,105	2,041	3.1
Industrial	1,367	1,146	2,191	2,102	4.2
Mechanical	5,815	4,959	2,259	2,190	3.2
Metallurgical (includes Metallurgy & Ceramic Eng.)	333	374	2,279	2,213	3.0
Mining	49	46	2,190	2,073	5.6
Nuclear (includes) Engineering Physics)	109	101	2,283	2,199	3.8
Petroleum	422	415	2,583	2,464	4.8
Technology	912	846	2,137	2,078	2.8
HUMANITIES & SOCIAL SCI.					
Humanities	686	760	1,461	1,477	-1.1
Economics*	695	701	1,729	1,665	3.8
Other Social Sciences	1,125	1,047	1,545	1,452	6.4
SCIENCES					
Agricultural	246	339	1,474	1,418	4.0
Biological	145	120	1,433	1,402	2.2
Chemistry	169	193	1,897	1,756	8.0
Computer Science	3,796	3,773	2,082	2,046	1.8
Health (Medical) Prof.	288	360	1,780	1,576	12.9
Mathematics	565	533	2,047	1,950	5.0
Other Physical & Earth Sciences	204	232	1,945	1,900	2.4

* Includes economics programs with both business and social science orientation.
** Includes Construction, Sanitary, & Transportation Engrg.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1984-85 Beginning Offers Formal Report, No. 3, July 1985

TABLE 2

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM AND SEX, July 1984 and July 1985

CURRICULUM	No. Offers July 1985		Average $ Offers July 1985		No. Offers July 1984		Average $ Offers July 1984	
	Men	Women	Men	Women	Men	Women	Men	Women
BUSINESS								
Accounting	3,606	3,031	$1,697	$1,698	3,653	2,806	$1,630	$1,624
Business - General (incl. Mgmt.)	2,214	1,413	1,665	1,592	2,550	1,699	1,566	1,537
Marketing and Distribution	1,015	940	1,604	1,486	950	727	1,524	1,435
ENGINEERING								
Aeronautical	555	88	2,226	2,255	366	40	2,158	2,115
Chemical	1,554	709	2,367	2,372	1,363	733	2,276	2,302
Civil*	1,110	273	1,956	2,024	995	169	1,900	1,877
Electrical**	9,399	1,570	2,282	2,294	9,086	1,244	2,213	2,217
Geological	61	15	2,105	2,105	62	5	2,027	2,215
Industrial	814	553	2,174	2,217	759	387	2,096	2,113
Mechanical	4,971	844	2,253	2,296	4,285	674	2,188	2,205
Metallurgical+	236	97	2,271	2,298	253	121	2,200	2,242
Mining	47	2	2,203	1,871	45	1	2,086	2,300
Nuclear (incl. Engineering Physics)	102	7	2,286	2,243	85	16	2,196	2,212
Petroleum	381	41	2,587	2,546	381	34	2,471	2,390
Technology	842	70	2,140	2,102	800	46	2,085	1,965
HUMANITIES AND SOCIAL SCIENCES								
Humanities	241	445	1,530	1,424	305	455	1,564	1,418
Economics++	445	250	1,752	1,689	439	262	1,679	1,643
Other Social Sciences	528	597	1,661	1,443	489	558	1,565	1,352
SCIENCES								
Agricultural	184	62	1,496	1,409	273	66	1,416	1,423
Biological	58	87	1,526	1,371	62	58	1,514	1,282
Chemistry	80	89	1,952	1,848	122	71	1,770	1,733
Computer	2,199	1,597	2,102	2,055	2,398	1,375	2,069	2,005
Health (Medical) Professions	49	239	2,063	1,722	38	322	1,757	1,555
Mathematics	289	276	2,062	2,032	282	251	1,980	1,916
Other Physical & Earth Sciences	160	44	1,992	1,776	197	35	1,929	1,736

*Includes Construction, Sanitary & Transportation Engineering
**Includes Computer Engineering
+Includes Metallurgy and Ceramic Engineering
++Includes Economics programs with both Business and Social Science Orientation

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1984-85 Beginning Offers, Formal Report, No. 3, July 1985

TABLE 3

NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND SEX, JULY 1984 AND JULY 1985

FUNCTIONAL AREA	No. Offers July 1985		Average $ Offers July 1985		No. Offers July 1984		Average $ Offers July 1984	
	Men	Women	Men	Women	Men	Women	Men	Women
Accounting/Auditing	3,910	3,251	$1,709	$1,701	3,691	2,855	$1,629	$1,623
Business Administration	1,092	797	1,693	1,556	1,213	842	1,573	1,484
Communications	148	177	1,749	1,539	152	174	1,584	1,413
Community & Service Organizations Work	47	102	1,466	1,177	64	102	1,284	1,250
EDP-Programming/ Systems	2,694	1,816	2,127	2,076	2,734	1,577	2,068	1,990
Engineering	18,597	3,774	2,260	2,286	17,031	3,138	2,192	2,211
Farm & Natural Resources Mgmt.	74	16	1,548	1,086	88	20	1,371	1,415
Finance & Economics	856	541	1,769	1,701	858	539	1,693	1,652
Health (Medical) Serv.	72	276	1,882	1,657	63	361	1,623	1,513
Manufacturing and/or Industrial Operations	422	136	2,069	2,120	691	254	2,052	1,962
Mathematics/Statistics	160	122	1,963	1,907	224	186	1,915	1,817
Merchandising/Sales Promotion	891	950	1,555	1,451	794	756	1,452	1,370
Personnel/Employee Relations	80	100	1,795	1,588	100	97	1,578	1,436
Research - Non-Scientific	158	112	1,962	1,769	179	117	1,800	1,663
Research - Scientific	344	212	2,116	1,890	524	205	2,011	1,791
Rotational Training-Non-Technical	292	265	1,557	1,477	355	295	1,457	1,371
Rotational Training-Technical	199	56	2,153	2,058	230	55	2,064	2,096
Sales - Non-Technical Degree	944	578	1,618	1,551	1,014	526	1,551	1,475
Sales - Technical/ Scientific Degree	160	58	2,180	2,131	233	56	1,959	1,950

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1984-85 Beginning Offers Formal Report, No. 3, July 1985.

TABLE 4

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO INEXPERIENCED MASTER'S DEGREE CANDIDATES BY CURRICULUM, JULY 1984 AND JULY 1985

CURRICULUM	Number Offers July 1985	Average $ Offers		Percent Change in $ Offers from 1984
		July 1985	July 1984	
ENGINEERING				
Chemical	212	$2,596	$2,557	1.58
Civil **	208	2,363	2,227	6.1
Electrical (inc. Computer Engrg)	965	2,727	2,584	5.5
Industrial	102	2,469	2,504	-1.4
Mechanical	508	2,621	2,524	3.8
Nuclear (including Engrg. Physics)	26	2,582	2,471	4.5
SCIENCES				
Chemistry	27	2,177	2,228	-2.3
Computer Science	472	2,584	2,505	3.2
Geology & Related Geo. Sciences	111	2,572	2,440	5.4
Mathematics	63	2,337	2,397	-2.5
Metallurgy (inc. Metallurgical Eng. Mat. Engrg. & Sci., and Ceramics)	46	2,517	2,480	1.5
BUSINESS				
Accounting	538	2,055	1,933	6.3
MBA - Non-Technical Undergraduate				
Less than 1 year	1,545	2,382	2,375	0.3
Over 1 to 2 years*	557	2,690	2,694	-0.2
Over 2 to 4 years*	684	2,840	2,768	2.6
Over 4 years*	438	2,845	2,818	1.0
MBA - Technical Undergraduate				
Less than 1 year	353	2,537	2,514	-0.2
Over 1 to 2 years*	118	2,812	2,778	1.2
Over 2 to 4 years*	184	2,934	2,896	1.3
Over 4 years*	131	2,913	3,004	-3.0
MS - Business (Inc. Management Marketing, Finance, etc.)	191	2,454	2,279	7.79
Industrial Management (inc. Indus. Administration)	36	2,405	2,223	8.2
Administration (inc. Public, Hospital, etc)	57	2,223	1,929	15.2
HUMANITIES AND SOCIAL SCIENCES				
Humanities	44	1,514	1,561	-3.0
Social Sciences	108	1,771	1,648	7.5

* Years of previous full-time, non-military employment.
** includes Construction, Sanitary, & Transportation Engrg.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1984-85 Beginning Offers Formal Report, No. 3, July 1985.

TABLE 5

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO DOCTORAL DEGREE CANDIDATES BY CURRICULUM, JULY 1984 AND JULY 1985

CURRICULUM	Number Offers July 1985	Average $ Offers		Percent Change in $ Offers from 1984
		July 1985	July 1984	
ENGINEERING				
Chemical	209	$3,405	$3,239	5.1%
Civil *	10	2,507	3,108	-19.3
Electrical (inc. Computer Engrg)	99	3,542	3,430	3.3
Mechanical	49	3,168	3,199	-1.0
SCIENCES				
Chemistry	215	3,032	2,960	2.4
Mathematics (inc. Operations Research, Stat. & Actuarail Sci.)	19	2,977	2,963	0.5
Metallurgy (inc. Metallurgical Eng. Mat. Engrg. & Sci., and Ceramics)	35	3,260	3,212	1.5
Physics	67	3,176	3,201	-0.8

* includes Construction, Sanitary, & Transportation.

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1985.

TABLE 6

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH JUNIOR/COMMUNITY COLLEGE DEGREES BY DISCIPLINE, 1985

DISCIPLINE	Number	Mean	Median
All Engineering - Related	181	$1,414	$1,492
Engineering Technology	43	1,368	1,170
Electronics Technology	120	1,416	1,492
Mechanical Technology	18	1,510	1,519
Chemistry	11	1,380	1,430
Computer Programming	52	1,392	1,535
Data Processing	24	1,187	1,017
Drafting	26	1,365	1,400
Business Administration	22	948	940
All Technical - Related	116	1,338	1,400
All Non-Technical - Related	41	1,071	1,200

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1985.

TABLE 7

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH BACHELOR'S DEGREES BY DISCIPLINE, 1985

DISCIPLINE	Number	Mean	Median
All Engineering	2,570	$2,248	$2,270
Aeronautical Engineering	15	2,322	2,335
Agricultural Engineering	11	1,944	1,943
Chemical Engineering	220	2,325	2,310
Civil Engineering	231	1,982	1,950
Electrical Engineering	936	2,299	2,300
Industrial Engineering	144	2,188	2,250
Mechanical Engineering	674	2,260	2,263
Metallurgical Engineering	23	2,296	2,293
Nuclear Engineering	23	2,292	2,282
Science (Engineering)	11	2,278	2,318
Biological Sciences	22	1,964	2,231
Chemistry	45	1,894	1,950
Computer Science	1,275	2,082	2,167
Geology	23	2,223	2,350
Mathematics-Statistics	127	1,931	2,065
Physics	24	2,148	2,157
Accounting	559	1,632	1,700
Agriculture	75	1,536	1,582
Bus., Economics & Finance	1,486	1,580	1,559
Education	31	1,444	1,450
Industrial Management	59	1,826	1,900
Liberal Arts	607	1,534	1,542
Marketing	1,236	1,476	1,500
All Technical (Non-Eng.)	1,602	2,057	2,133
All Non-Technical	4,460	1,551	1,500

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1985.

TABLE 8

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH MASTER'S DEGREES (EXCLUDING MBA) BY DISCIPLINE, 1985

DISCIPLINE	Number	Mean	Median
All Engineering	281	$2,539	$2,583
Chemical Engineering	32	2,608	2,675
Civil Engineering	28	2,318	2,265
Electrical Engineering	99	2,629	2,650
Mechanical Engineering	60	2,541	2,580
Computer Science	140	2,456	2,325
Mathematics-Statistics	18	2,471	2,445
Accounting	23	1,949	1,917
Business, Economics & Finance	24	2,145	2,042
All Technical (Non-Engineering)	199	2,445	2,400
All Non-Technical	83	2,161	2,042

TABLE 9

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH MBA DEGREES AND UNDERGRADUATE DEGREES BY DISCIPLINE, 1985

DISCIPLINE	Number	Mean	Median
All Engineering	16	$2,747	$2,800
Accounting	43	2,386	2,350
Bus., Econ. & Finance	189	2,432	2,450
Computer Science	12	2,486	2,438
Marketing	78	2,777	2,876
All Tech. (Non-Eng.)	16	2,527	2,500
All Non-Technical	368	2,478	2,450

TABLE 10

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH DOCTORAL DEGREES BY DISCIPLINE, 1985

DISCIPLINE	Number	Mean	Median
All Engineering	52	$3,517	$3,567
Electrical Engineering	20	3,615	3,482
Chemistry	25	3,150	3,250
Physics	14	3,281	3,267
All Technical (Non-Eng.)	58	3,260	3,267

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1985.

TABLE 11

MEDIAN MONTHLY STARTING SALARIES OF INEXPERIENCED BACHELOR'S GRADUATES (NON-ENGINEERING) BY TYPE OF INDUSTRY AND DISCIPLINE, 1985

TYPE OF INDUSTRY	DISCIPLINE											
	Industrial Management	Biological Sciences	Chemistry	Computer Science	Math./ Stats.	Accounting	Agriculture	Bus. Econ. & Finance	Liberal Arts	Marketing	All Technical (Non-Eng'r.)	All Non-Technical
TOTAL	$1,900	$2,231	$1,950	$2,167	$2,065	$1,700	$1,582	$1,559	$1,542	$1,500	$2,133	$1,500
All Manufacturing/Extractive Firms	1,907	2,261	2,000	2,196	2,210	1,788	1,730	1,695	1,635	1,500	2,196	1,660
All Non-Manufacturing Firms	1,625	1,407	1,900	1,970	1,900	1,500	1,358	1,500	1,500	1,225	1,970	1,500
Apparel & Textile Product Manufacturers	1,450			1,400						1,333	1,400	1,333
Banking & Other Financial Firms				1,666		1,400		1,376	1,750	1,376	1,666	1,417
Chemical/Pharmaceutical/Plastic Rubber Product Manufacturers		2,261	1,775	1,800		1,500		1,933	1,933	2,240	2,261	1,933
Communications Services				2,225	2,124	1,700		2,087			2,225	2,087
Construction & Engineering Firms						1,476					1,690	1,476
Electrical/Aerospace/Aircraft/ Electronics Product Manufacturers				2,200	2,331	1,762		1,660	1,635	1,500	2,200	1,500
Fabricated Metal Product Mfg.				2,013		1,471		1,552			2,100	1,547
Food/Beverage/Tobacco Product Mfg.	1,907			2,060		1,625	1,583	1,830		1,755	2,060	1,755
Hospitality Firms (food, lodging & rec.)									1,600			1,300
Insurance Firms				1,667	1,575	1,417		1,505	1,375	1,550	1,667	1,505
Machinery & Heavy Equipment Mfg.										1,585		1,585
Merchandising Firms (retail & wholesale)	1,521			1,100	1,500	1,500	1,358	1,500	1,500	1,375	1,500	1,500
Paper Product Mfg./Printers/Publishers				2,083		1,692		1,833	1,667	1,692	2,083	1,692
Research Organizations				2,358				1,908			1,950	1,454
Utilities	1,625		2,065	2,040	1,855	1,627		1,688	1,761	1,715	2,037	1,667

NOTE: Blanks indicate fewer than 5 cases reported.

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1985.

TABLE 12

MEDIAN MONTHLY STARTING SALARIES OF INEXPERIENCED BACHELOR'S GRADUATES IN ENGINEERING BY TYPE OF INDUSTRY AND SUB-DISCIPLINE, 1985

TYPE OF INDUSTRY	SUBDISCIPLINE IN ENGINEERING							
	ALL	Aero-nautical	Chemical	Civil	Electrical	Metal-lurgical	Mechanical	Nuclear
TOTAL	**$2,270**	**$2,335**	**$2,310**	**$1,950**	**$2,300**	**$2,293**	**$2,263**	**$2,282**
All Mfg./Extractive Firms	2,275	2,335	2,310	2,046	2,300	2,275	2,250	
All Non-Mfg. Firms	2,200		2,185	1,950	2,300		2,263	2,282
Apparel & Textile Product Manufacturers	2,350		2,350					
Chemical/Pharmaceutical/Plastic/Rubber Product Manufacturers	2,425		2,433				2,354	
Communications Services	2,480				2,480			
Construction & Engineering Firms	1,950		2,149	1,950	2,185		2,168	
Electrical/Aerospace/Aircraft/ Electronics Product Manufacturers	2,270	2,335	2,350	2,200	2,270	2,330	2,292	
Fabricated Metal Product Manufacturers	2,275		2,310	1,981	2,161	2,247	2,275	
Food/Beverage/Tobacco Prod. Manufacturers	2,250		2,208				2,282	
Machinery & Heavy Equip. Manufacturers	2,400						2,400	
Merchandixing Firms (Retail & Wholesale)	1,875							
Paper Prod. Manufacturers/Printers/Publishers	2,458							
Research Organizations	2,358				2,358		2,358	
Utilities	2,250		2,240	2,250	2,250		2,263	2,282

NOTE: Blanks indicate fewer than 5 cases reported.

Source: Recruiting Trends 1984-85, Michigan State University, November 30, 1984

TABLE 13

ESTIMATED STARTING SALARY OFFERS AND % CHANGE FOR BACCALAUREATE GRADUATES BY ACADEMIC MAJOR, 1984-85

ACADEMIC MAJOR	SALARY	% CHANGE
Electrical Engineering	$28,086	3.7
Metallurgy/Materials Science	28,012	2.7
Mechanical Engineering	28,004	3.4
Chemical Engineering	27,827	2.7
Computer Science	26,690	3.5
Physics	25,411	2.6
Packaging Engineering	23,358	1.7
Civil Engineering	22,789	2.6
Mathematics	20,630	2.7
Financial Administration	19,506	2.3
Accounting	19,262	2.7
Marketing/Sales	19,157	2.6
General Business Admin.	17,782	2.2
Social Science	17,640	2.3
Personnel Administration	17,181	2.2
Education	17,082	2.6
Hotel, Restaurant & Institutional Management	16,871	2.1
Agriculture & Natural Resources	16,658	1.7
Communications	16,299	1.9
Arts & Letters	15,124	2.3
Human Ecology	14,827	2.2
All Majors		
Bachelor's	20,470	3.7
Master's	23,868	3.3
Ph.D.	26,808	2.9

SOURCE: Northwestern Endicott Report, 1985, Thirty-ninth Annual Report, by Victor R. Lindquist.

TABLE 14

NUMBER AND AVERAGE MONTHLY STARTING SALARIES FOR NEW GRADUATES BY FIELD AND DEGREE, 1984 AND 1985

FIELD	BACHELOR'S DEGREE				MASTER'S DEGREE			
	No. to be be hired in 1985	1984	1985	Percent Increase	No. to be be hired in 1985	1984	1985	Percent Increase
Engineering (120)	9,148	$2,138	$2,240	4.8	1,102	$2,461	$2,575	4.6
Accounting (96)	4,430	1,657	1,719	3.7	243	2,080	2,283	6.9
Sales-Marketing (81)	3,280	1,670	1,718	2.9				
Business Administration (60)	2,521	1,638	1,658	1.2				
Liberal Arts (29)	483	1,570	1,569	-0.1				
Chemistry (26)	272	1,940	2,018	4.0				
Math or Statistics (230)	230	1,845	1,892	2.5				
Economics or Finance (48)	1,207	1,670	1,747	4.6				
Computer Science (90)	3,807	1,905	2,013	5.7				
Other Fields (33)	868	1,707	1,831	7.3	683	2,092	2,208	5.5
MBA with Technical BS					333	2,519	2,650	5.2
MBA with Non-Technical BA					1,221	2,370	2,529	6.7
Other Technical Fields					472	2,331	2,477	6.3

NOTE: Number in parenthesis indicates companies hiring bachelor's level graduates in 1985.

SOURCE: CHEMICAL AND ENGINEERING NEWS, American Chemical Society, November 5, 1962; October 28, 1963; November 9, 1964; October 18, 1965; October 23, 1967; October 28, 1985; 1979 Survey Report, Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates; & Starting Salaries 1980, 1981,1982, 1983 and 1984.

TABLE 15

MEDIAN MONTHLY STARTING SALARIES FOR MEN AND WOMEN CHEMISTS*, BACHELOR'S LEVEL, 1961-1985.

YEAR	MEN	WOMEN	% BELOW MEN
1961	$500	$433	13.4
1962	525	450	14.3
1963	550	473	14.0
1964	560	480	14.3
1965	590	499	15.4
1966	625	550	12.0
1967	660	600	10.0
1968	712	625	12.2
1969	750	702	6.4
1970	758	644	15.0
1971	691	650	5.9
1972	708	650	8.2
1973	750	708	5.6
1974	816	833	+2.1
1975	833	801	3.8
1976	900	908	+0.9
1977	1,000	1,000	0.0
1978	1,042	1,083	+3.9
1979	1,200	1,233	+2.8
1980	1,250	1,250	0.0
1981	1,417	1,541	+8.8
1982	1,417	1,417	0.0
1983	1,417	1,333	5.9
1984	1,583	1,542	2.6
1985	1,667	1,500	10.0

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1984

TABLE 16

NUMBER AND MEDIAN STARTING SALARIES OF INEXPERIENCED CHEMISTS* BY HIGHEST DEGREE EARNED, TYPE OF EMPLOYER AND SEX, 1984

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Private Industry	(107) $20,000	(12) $26,400	(62) $35,000	(101) $20,000	(3) $26,000	(14) $34,800
College or University	(4) 10,700	(2) 15,100	(13) 21,000	(6) 13,750	(2) 15,500	(3) 16,000
High School	(3) 12,000			(8) 13,250		
Government	(6) 17,221	(2) 31,000	(5) 30,000	(5) 13,600		(4) 29,200
Hospital or Laboratory	(9) 16,640			(4) 13,250		
Other	(10) 17,750	(2) 23,000	(3) 36,000	(9) 16,800		(2) 35,300

NOTE: Blanks indicate no data reported.
* Includes only members of the American Chemical Society.

TABLE 17

NUMBER AND MEDIAN STARTING SALARIES OF INEXPERIENCED CHEMISTS* AND CHEMICAL ENGINEERS* BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1984

TYPE OF EMPLOYER	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Private Industry	(208) $20,000	(15) $26,400	(76) $34,900	(424) $27,500	(45) $30,300	(16) $40,000
College or University	(10) 12,500	(4) 15,500	(16) 20,000			(3) 37,000
High School	(11) 12,500					
Government	(11) 16,000	(2) 31,000	(9) 30,000	(34) 21,527		
Other	(19) 17,500	(2) 23,000	(5) 36,000	(10) 24,000		
All Employers	(274) 18,800	(25) 26,000	(107) 34,200	(473) 27,000	(47) 30,300	(20) 29,950

NOTE: Blanks indicate insufficient data reported.

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1984

TABLE 18

MEDIAN AND MEAN ANNUAL STARTING SALARIES OF INEXPERIENCED GRADUATE CHEMISTS* BY FIELD OF HIGHEST DEGREE, 1984

FIELD OF HIGHEST DEGREE	M. S.		Ph.D.	
	Median	Mean	Median	Mean
Analytical	$25,000	$23,350	$34,000	$31,343
Inorganic	20,000	18,667	34,000	33,506
Organic	26,200	24,530	34,800	31,702
Physical			34,000	33,042
Chemistry, General	28,500	25,633	28,500	27,025
Chemistry, Other			34,400	33,950
All Fields	26,000	23,796	34,200	32,075

* Includes only members of the American Chemical Society.

NOTE: Blanks indicate less than 3 responses.

TABLE 19

MEDIAN ANNUAL STARTING SALARIES OF CHEMISTS* AND CHEMICAL ENGINEERS* BY DEGREE LEVEL AND PROFESSIONAL EXPERIENCE, 1984

DEGREE LEVEL	PROFESSIONAL EXPERIENCE			
	<12 Months	12-36 Months	>36 Months	TOTAL
CHEMISTS				
B. S.	$18,800	$20,000	$22,500	$19,432
M. S.	26,000	24,000	26,820	26,000
Ph. D.	34,200	34,000	32,000	34,100
TOTAL	21,000	22,000	25,000	21,500
CHEMICAL ENGINEERS				
B. S.	27,000	28,000	26,000	27,300
M. S.	30,300	30,000	34,800	30,360
Ph. D.	39,950	40,300	38,000	40,000
TOTAL	27,600	28,000	30,000	27,800

*Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1984

TABLE 20

NUMBER AND MEDIAN STARTING SALARIES OF INEXPERIENCED CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND GEOGRAPHIC REGION, 1984

GEOGRAPHIC REGION	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Pacific	(10) $19,500		(7) $34,000	(32) $27,000	(10) $31,000	(3) $41,500
Mountain	(5) 16,400		(3) 36,400	(13) 27,000		
West North Central	(20) 20,000		(7) 35,000	(28) 27,000	(5) 30,000	
West South Central	(16) 18,550		(9) 34,000	(68) 27,980	(4) 30,900	(3) 39,600
East North Central	(67) 20,000	(6) 25,000	(22) 34,000	(90) 27,600	(4) 31,000	(3) 38,000
East South Central	(16) 17,850	(3) 19,000	(3) 32,000	(23) 27,180		
Middle Atlantic	(82) 19,678	(7) 29,000	(31) 34,800	(109) 27,000	(15) 30,200	(5) 40,000
South Atlantic	(42) 16,250	(5) 24,000	(23) 34,500	(75) 27,000	(6) 30,180	(6) 39,950
New England	(15) 17,450			(33) 26,400		
All Regions Combined	(274) 18,800	(25) 26,000	(107) 34,200	(473) 27,000	(47) 30,300	(20) 39,950

NOTE: Blanks indicate less than 3 responses.
* Includes only members of the American Chemical Society.

TABLE 21

NUMBER AND MEAN ANNUAL STARTING SALARIES OF INEXPERIENCED CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND SEX, 1984

HIGHEST DEGREE EARNED	CHEMISTS				CHEMICAL ENGINEERS			
	Men		Women		Men		Women	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Bachelor's	141	$18,712	133	$18,648	309	$26,095	164	$26,569
Master's	19	24,627	6	21,167	37	30,652	10	30,495
Doctorate	84	32,245	23	31,456	19	38,892	1	40,000

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Chemical & Engineering News, October 28, 1985

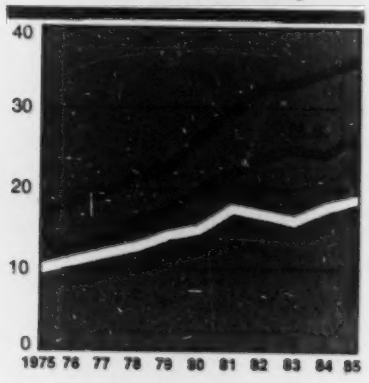
TABLE 22

COMPARISON OF MEDIAN STARTING SALARIES OF INDUSTRIAL AND ALL CHEMISTS* AND CHEMICAL ENGINEERS* BY DEGREE LEVEL AND SEX, 1985

	CHEMISTS			CHEMICAL ENGINEERS		
	B.S.	M.S.	Ph.D.	B.S.	M.S.	Ph.D.
ALL EMPLOYERS	$19,000	$27,000	$36,000	$27,700	$31,000	$40,000
Men	20,000	27,950	36,000	27,750	30,900	40,000
Women	18,000	27,000	35,850	27,650	32,000	39,900
IND. EMPLOYERS						
Men	20,000	28,000	36,500	28,000	31,000	40,000
Women	20,000	27,250	37,700	28,500	32,000	39,800

CHART 1

MEDIAN ANNUAL SALARIES OF INEXPERIENCED CHEMISTS BY DEGREE LEVEL, 1975-1985 ($ Thousands)



Note: Data as of the summer of each year.
Source: ACS starting salary surveys

SOURCE: Industrial Chemical News, October 1984 and October 1985.

TABLE 23

MONTHLY AVERAGE STARTING SALARIES OF INDUSTRIAL CHEMISTS BY DEGREE LEVEL, 1984 AND 1985

DEGREE LEVEL	1984	1985	% Increase
B. S.	$1,932	$2,164	12.0
M. S.	2,280	2,535	11.2
Ph.D.	2,834	3,134	10.6

SOURCE: American Institute of Physics, 1983-84 Survey of Physics and Astronomy Bachelor's Degree Recipients, AIP Pub. R-211.16, March 1985.

TABLE 24

DISTRIBUTION AND MEDIAN MONTHLY STARTING SALARIES OF PHYSICS BACHELOR'S DEGREE RECIPIENTS BY TYPE OF EMPLOYER AND SEX, 1984

TYPE OF EMPLOYER	MEN (470 Reported Salaries)		WOMEN (90 Reported Salaries)		TOTAL (560 Reported Salaries)	
	% Distribution by Employer	Median	% Distribution by Employer	Median	% Distribution by Employer	Median
Industry - Mfg.	38	$2,170	36	$2,100	38	$2,160
Industry - Service	15	2,040	17	2,050	16	2,040
High School	3	1,200	12	1,050	4	1,100
College or University	4	1,250	7		5	1,230
Government, Civilian	10	1,750	10	1,550	10	1,690
Government, Military	27	1,520	13	1,400	24	1,510
FFRC*	2	2,200	5	1,950	2	2,150
Other	1				1	1,250
Total	100	1,870	100	1,875	100	1,870

* Federally Funded Research Center. NOTE: Blanks indicate insufficient data.

SOURCE: American Institute of Physics, 1983-84 Graduate Student Survey, September 1985

TABLE 25

MEDIAN MONTHLY STARTING SALARIES OF NEW PHYSICS DEGREE RECIPIENTS BY TYPE OF EMPLOYER & DEGREE LEVEL, 1984

TYPE OF EMPLOYER	TERMINAL MASTER'S RECIPIENTS		DOCTORATE RECIPIENTS				BACHELOR'S DEGREE RECIPIENTS	
			% Accepting:		Monthly Salaries For			
	Percentage Accepting Positions	Salary	Post-docs	Potentially Permanent Positions	Post-docs	Potentially Permanent Positions	Percentage Accepting Positions	Salary
Secondary School	7%	$1,560	%	%	$	$	4%	$1,100
4-Year College	4	1,750		3		2,050	2	1,230
University	13	1,450	34	10	1,675	2,210	3	1,230
Industry	53	2,550	3	26	2,750	3,160	54	2,120
Government (inc. military)	17	2,100	4	5	2,120	2,590	34	1,560
FFRC*	5	2,225	9	4	2,030	3,090	2	2,120
Other	1		1	1	2,050	3,050	1	1,250
All Employers	100	2,360	100		1,790	3,020	100	1,870

*Federally-funded Research Center. NOTE: Blanks indicate no salaries reported.

SOURCE: American Mathematical Society, NOTICES, Vol. 31, No. 7, November 1984.

TABLE 26

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER OR ACTIVITY AND SEX, 1983 AND 1984

TYPE OF EMPLOYER	MEN		WOMEN	
	1983	1984	1983	1984
Teaching or Teaching & Research (9 Months)	$22,000	$23,200	$21,000	$22,800
Teaching or Teaching & Research (12 Months)	25,500	26,000	26,500	27,500
Research (12 Months)	26,200	28,300	26,000	20,000
Business & Industry (12 Months)	37,000	38,300	37,500	34,200
Government (12 Months)	31,300	32,600	32,000	20,200

TABLE 27

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR NEW PH.D.S BY TYPE OF EMPLOYER, 1980-1984

TYPE OF EMPLOYER	1980	1981	1982	1983	1984
Teaching or Teaching & Research (9 Months)	$17,100	$19,000	$20,600	$21,700	$23,000
Research (9 Months)	13,700		19,000	20,000	20,500
Teaching or Teaching & Research (12 Months)	19,500	20,300	25,000	26,000	26,000
Research (12 Months)	18,000	20,000	24,500	26,200	26,100
Business & Industry (12 Months)	28,400	30,800	35,400	37,500	37,800
Government (12 Months)	24,400	29,000	32,500	32,200	31,500

NOTE: Blanks indicate that not enough returns were received to warrant including the figures.

SOURCE: Robert Half of New York, Inc., Prevailing Financial & Data Processing Starting Salaries, 1985

TABLE 28

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL BY POSITION AND COMPANY SIZE, 1984-1985

POSITION AND COMPANY SIZE	SALARY RANGES		Percent increase
	1984	1985	
SYSTEMS & PROGRAMMING			
Manager			
Large Companies	$33,000-41,000	$36,000-45,000	9.5
Medium Companies	32,000-38,000	34,000-41,000	7.9
Project Manager			
Large Companies	32,000-40,000	34,000-44,000	8.3
Medium Companies	29,000-36,000	31,000-38,000	6.2
Project Leader			
Large Companies	30,000-37,000	32,000-41,000	9.0
Medium Companies	29,000-36,000	31,000-38,000	6.2
Systems Analyst			
Large Companies	31,000-38,000	33,000-40,000	5.8
Medium Companies	28,000-35,000	30,000-37,000	6.3
Programmer Analyst			
Large Companies	23,500-31,000	25,000-33,000	6.4
Medium Companies	22,000-30,000	23,000-31,000	3.8
Programmer			
Large Companies	19,000-25,000	21,000-27,000	9.1
Medium Companies	19,000-23,000	20,000-25,000	7.1
TECHNICAL SUPPORT			
Manager			
Large Companies	36,000-46,000	38,000-48,000	4.9
Medium Companies	34,000-41,000	35,000-43,000	4.0
Systems Programmer			
Large Companies	27,000-37,500	29,000-39,000	5.4
Medium Companies	28,000-37,000	28,000-38,000	1.5
DATA BASE SUPPORT			
Data Base Administrator/Manager			
Large Companies	31,000-40,000	34,500-43,500	9.9
Medium Companies	30,000-36,000	32,500-40,000	9.1
Data Base Analyst			
Large Companies	29,000-39,000	31,000-41,000	5.9
Medium Companies	27,000-32,000	28,000-34,000	5.1
TELECOMMUNICATIONS			
Manager			
Large Companies	32,000-38,000	34,000-40,000	5.7
Medium Companies	28,000-36,000	29,500-38,000	5.5
Telecommunications Specialist			
Large Companies	30,000-34,000	31,000-36,000	4.7
Medium Companies	22,000-32,000	24,000-34,000	7.4
OPERATIONS			
Manager			
Large Companies	28,000-36,000	30,000-39,000	7.8
Medium Companies	28,000-36,000	29,000-37,000	3.1
Shift Supervisor			
Large Companies	22,000-28,000	23,500-30,000	7.0
Medium Companies	20,000-24,000	21,000-25,000	4.5
Operator			
Large Companies	15,500-19,500	16,500-21,000	7.1
Medium Companies	15,000-19,000	16,000-20,000	5.9
Control Analyst			
Large Companies	$15,500-19,500	$16,000-20,500	5.8
Medium Companies	14,000-18,500	15,000-19,500	6.2
EDP AUDIT			
Manager			
Large Companies	32,000-42,000	33,500-44,000	4.7
Medium Companies	30,000-37,000	32,000-39,000	6.0
Specialist			
Large Companies	26,000-35,000	28,000-37,000	6.6
Medium Companies	24,000-32,000	25,000-33,500	4.5

SOURCE: Robert Half of New York, Inc., Prevailing Financial and Data Processing Starting Salaries, 1985

TABLE 29

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL IN SMALL COMPANIES BY POSITION, 1984 AND 1985

POSITION	SALARY RANGES		Percent Increase
	1984	1985	
SYSTEMS & PROGRAMMING			
Manager	$28,000-36,000	$29,000-37,000	3.1
Project Manager	24,000-31,000	25,500-33,000	6.4
Project Leader	24,000-31,000	25,500-33,000	6.4
Systems Analyst	24,000-30,000	25,000-32,000	5.6
Programmer Analyst	20,000-27,000	22,000-29,000	8.5
Programmer	16,000-20,000	17,000-22,000	8.3
OPERATIONS			
Manager	22,500-30,000	24,000-32,000	6.7
Operator	13,000-17,000	13,500-18,000	5.0
Control Analyst	12,000-16,000	13,000-16,500	5.4
CONSULTING			
Manager	40,000-57,000	42,000-60,000	5.2
Senior	31,000-38,000	33,000-41,000	7.2
Associate	26,000-33,000	27,000-34,000	3.4
TECHNICAL WRITING			
Manager	32,000-42,000	33,000-43,000	2.7
Software/Hardware Writer	24,000-29,000	25,000-31,000	5.7
Documentation Specialist	19,000-27,000	20,500-28,000	5.4
METHODS ANALYSIS			
Manager	30,000-36,000	31,000-37,000	3.0
Analyst	20,000-27,000	21,000-28,000	4.3
EDP EDUCATION			
Manager	33,000-41,000	35,000-43,000	5.4
Curriculum Developer	25,000-34,000	28,000-36,000	8.5
Instructor	22,500-30,000	23,000-31,000	3.8
SOFTWARE DEVELOPMENT			
Product Manager	42,000-62,000	44,000-66,000	5.8
Software Engineer	32,000-42,000	34,000-44,000	5.4

SOURCE: Battelle, Columbus Laboratories, 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984

TABLE 30

NUMBER AND MEAN MONTHLY STARTING SALARIES OF NONSUPERVISORY EMPLOYEES ENGAGED IN R&D ACTIVITIES BY FIELD OF DEGREE AND DEGREE LEVEL, 1984

FIELD OF DEGREE	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	Number	Salary	Number	Salary	Number	Salary
Engineering	1,851	$2,237	74	$2,545	40	$2,908
Chemistry	78	1,656	5	2,260	20	2,330
Physics	39	2,154			4	3,025
Life Sciences	33	1,388			6	1,883
Math & Statistics	129	2,019	8	2,288		
Social Sciences	18	1,367	3	1,967		

TABLE 31

NUMBER AND MEAN STARTING SALARIES OF NONSUPERVISORY ENGINEERING BACHELOR'S DEGREE EMPLOYEES ENGAGED IN R&D ACTIVITIES BY WORKING-AS-OCCUPATION, 1984

WORKING-AS-OCCUPATION	Number	Salary
Aeronautical Engineering	151	$2,154
Chemical Engineering	50	2,208
Electrical Engineering	1,219	2,276
Materials Engineering	13	2,292
Mechanical Engineering	139	2,181
Metallurgical Engineering	8	1,600
Nuclear Engineering	53	2,166

SOURCE: U.S. Department of Labor, Occupational Outlook Handbook, 84-85 Edition.

TABLE 32

STARTING SALARIES OF SCIENTISTS BY FIELD, TYPE OF EMPLOYER AND HIGHEST DEGREE ATTAINED, 1982 AND 1983

OCCUPATION	Estimated Number Employed in 1982	TYPE OF EMPLOYER					
		1982 Private Industry			1983 Federal Government		
		B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Engineers	1,244,000	$25,200	$28,200	$36,300	$17,383-21,527	$24,981	$26,959
Mathematicians*	41,000	21,300	25,900	30,500	13,000-16,100	19,700-23,800	23,800-28,500
Statisticians*	20,000				13,000-16,100	19,700-23,800	23,800-28,500
Agricultural Scientists	37,000	16,700			13,369-16,559	16,559-20,256	24,508-29,374
Biological Scientists	104,000	16,500	17,000		13,369-16,559	16,559-20,256	24,508-29,374
Foresters & Conservationists	31,000		15,200**		13,369-16,559	16,559	
Geologists & Geophysicists	56,000	23,800	29,000		13,369-16,559	16,559-20,256	24,508-29,374
Meteorologists	4,700				13,369-16,559	16,559-20,256	24,508-29,374
Chemists	108,000	21,000	23,800	32,600	13,369-16,559	16,559-20,256	24,508-29,374
Physicists	38,000	24,000	26,500	34,000	13,369-16,559	16,559-20,256	24,508-29,374
Accountants & Auditors	856,000	18,400	21,600		13,000-16,100	19,700	
Psychologists*	107,000				13,000-16,100	19,700	23,800
Economists	45,000	18,500			13,000-16,100	19,700	23,800
Social Workers	345,000	14,300+	18,100++			20,256	
Sociologists*	21,000				13,000-16,100	19,700	23,800
Computer Programmers	266,000		275-680***			300***	
Computer Systems Analysts	254,000		330-850***			200***	

* Federal Salaries are for 1982. ** Average salary all levels. ***Weekly Earnings in 1982-all degree levels.
+Salary in State and Local Governments. ++Salary in Hospitals & Medical Centers.

SALARIES OF EXPERIENCED SCIENTIFIC AND TECHNICAL PERSONNEL

Three subsystems comprise the **National Science Foundation's Scientific and Technical Personnel Data System** - the **Survey of Doctorate Recipients**, the **New Entrants Survey** and the **Experienced Sample Surveys.**

Surveys of doctoral scientists and engineers are conducted by the **National Research Council** on the basis of a sample of individuals drawn from a roster of doctorate recipients. The roster is compiled from a number of sources, including the **National Academy of Sciences/National Research Council's Doctorate Records File**; the **National Science Foundation's National Register of Scientific and Technical Personnel**, which from 1954 through 1970 collected information on highly qualified scientists; **American Men and Women of Science**; and several other sources including university and college catalogs of doctorate-granting institutions; federal laboratories; and selected industrial organizations. The 1983 population consists of individuals working in the U.S. who earned doctorates at U.S. or foreign universities within the 42-year period 1940-1982. Included in this population are individuals whose doctorates are in the natural or social sciences, mathematics, and engineering, as well as individuals who received research doctorates in non-S/E fields but were known to be employed as scientists or engineers.

The 1983 **Survey of Doctorate Recipients**, the sixth in a biennial series first conducted in 1973, included a sample of approximately 54,900 scientists and engineers. Data from this survey were published by the **National Science Foundation** in **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES: 1983** and by the **National Research Council** in **SCIENCE, ENGINEERING AND HUMANITIES DOCTORATES IN THE UNITED STATES, 1983 PROFILE.**

The median annual salary for all doctoral scientists and engineers in 1983 was $40,100, with those employed by business and industry receiving the highest median salary - $47,000. Not surprisingly, salaries paid by elementary/secondary schools were the lowest - $31,300 - 22% below the overall median. Economists working in business and industry recorded the highest median salary in 1983 - $52,100 while physical and life scientists working in elementary and secondary schools earned the least - $25,300 (Table 33). Table 34 presents detailed data on salaries paid to doctoral scientists and engineers employed in business and industry in 1979, 1981 and 1983. During this five-year period, salaries paid to doctoral scientists and engineers increased 39.5%.

Teaching, the dominant work activity of doctoral scientists and engineers continues to provide the lowest salary. In 1983, the median annual salary of Ph.D.s who reported teaching as their primary work activity was $34,800 - $19,000 (35.3%) below that of doctoral scientists and engineers who reported the management or administration of R & D as their primary work activity (Table 35).

By geographic area, doctoral scientists and engineers working in the Pacific region reported the highest median salaries - $41,500, while those working in east south central reported the lowest - $35,700. Atmospheric scientists working in the South Atlantic region reported the highest salaries - $48,400 - while sociologists/anthropologists working in the west north central area reported the lowest - $28,600 (Table 36). Median annual salaries of doctoral scientists and engineers by years of professional experience and age in 1983 are presented in Tables 37 and 38.

Women doctoral scientists and engineers continue to earn considerably less than their male counterparts regardless of field or experience level. Overall, women earned 22.2%

less than men. By field, women who received their Ph.D. in engineering reported the highest median salary in 1983 - $41,100, while those who received their doctorate in agricultural sciences earned the least - $29,200 (Table 39). With the exception of Asian mathematicians and environmental scientists, white Ph.D.s earned higher salaries than minority Ph.D.s regardless of field (Table 40).

The **New Entrants Survey** provides data on recent bachelor's and master's degree recipients in science and engineering fields who have entered the labor force. The 1984 survey of 1982-83 bachelor's and master's degree graduates finds that women already earn less than their male counterparts one to two years after receipt of their degree. In all science and engineering fields in 1984, women bachelor's degree graduates of 1982-83 had a median annual salary of $7,800 (32.8%) below the $23,800 median salary reported by their male counterparts. This differential has been widening. In 1980, women bachelor's degree graduates of 1978-79 reported a median annual salary of $5,400 less than their male counterparts. Although women baccalaureates employed in science and engineering had a higher salary than those employed outside of science and engineering, the gap between men and women was wider for those employed in science and engineering (Table 41). The same salary differential exists for women master's degree recipients as shown in Table 42. As was true for doctoral scientists and engineers, both bachelor's and master's degree scientists and engineers employed in business and industry reported the highest salaries, while those working in educational institutions reported the lowest (Table 43). Overall, both bachelor's and master's degree scientists and engineers working in research and development earned the highest salaries (Table 44). By field of employment, bachelor's and master's degree engineers of both sexes reported the highest salaries (Table 45).

The **1984 NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES** is the sixteenth annual survey conducted by the **Battelle Columbus Laboratories** for the **U. S. Department of Energy.** The 1984 report presents salary data from 292 establishments employing 101,537 scientists and engineers spending more than half of their time in R & D activities.

By working-as-occupation, aeronautical and astronautical engineers reported the highest average monthly salary at both the bachelor's and master's degree levels, while electrical and electronic engineers reported the highest salary at the doctoral level among nonsupervisory scientists and engineers working in research and development in 1984. Agricultural and biological scientists reported the lowest monthly mean salaries at all three degree levels (Tables 46, 47, and 48).

Those scientists and engineers working in contract research centers earned the highest average salaries at both the bachelor's and master's degree level, while doctorate scientists and engineers working in industry earned the highest salaries (Table 49).

By highest degree field, physicists at the bachelor's level and engineers at the master's and doctoral level reported the highest average salaries working in R & D in 1984 Life scientists earned the lowest salaries at all three degree levels (Table 50).

Women continue to earn substantially less than their male colleagues working in R & D regardless of field or degree level. Although salaries are approximately equal in the first few years after graduation, men's salaries rise faster than women's, so that the salary gap increases over time (Table 51). With the exception of engineering, bachelor's degree scientists and engineers working in a field other than the one in which they received their degree earned higher average salaries in R & D in 1984 (Table 52). Among professional degreed individuals working in R & D in 1984, those having a doctor's degree in veterinary medicine earned the highest salaries (Table 53).

Another survey of of nearly 3,700 scientists and engineers working in research and development by **RESEARCH AND DEVELOPMENT** Magazine finds that the median salary of R & D professionals in 1985 was $40,180, up 6.3% from the $37,800 reported in 1984. The most impressive salary increase performance came from the ceramists with 60% getting raises of 6% or more. However, mathematicians reported the highest median salary of scientists and engineers employed in research and development in 1985, up 14.4% from the previous year, while biologists reported the lowest salary (Table 54).

The research and development scientist or engineer with a doctoral degree can expect a career income advantage of $715,000 over his R & D colleague who did not go beyond the baccalaureate level. As shown in Table 55, Ph.D. scientists and engineers earn 20.5% more than their colleagues with only a baccalaureate.

As in previous years, women who work in research and development earn a lot less than men do. However, this is not to say that they always earn less for equal work. Because of opportunities, womnen almost always have less experience than men in R & D, they have less time with their present employers, and they usually have less education. Thus, the higher paying jobs tend to be occupied by males with advanced degrees and substantial work experience. Salaries of men and women employed in research and development by type of employer are shown in Table 56.

Average salaries for 25 professional, administrative, technical, and clerical occupations in medium and large size firms increased between 3 and 6 percent from March 1984 to March 1985, according to data from the annual **NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY** conducted by the **Bureau of Labor Statistics** of the U.S. Department of Labor. March 1985 average salaries for eight levels of engineers, the largest group studied, ranged from $27,405 a year for college graduates in trainee positions to $76,205 for those responsible for highly complex engineering programs. Chemists' salareis ranged from $22,631 in level I to $68,710 in level VII. Level IV engineers and chemists, the largest groups in each profession and representing fully experienced employees, averaged $40,991 and $39,418 a year respectively. Programmers and programmer analyst trainees (level I) averaged $20,318, while systems analysts I averaged $28,197 (Table 57). Table 58 presents similar data for March 1984 for comparison.

SALARIES 1985, the annual analysis of the **American Chemical Society's** survey of salaries and employment, finds the median annual salary for chemists increased about 5% from 1984 to 1985, consisting of a 3.6% increase at the bachelor's level, 5.9% at the master's and 4.8% at the doctoral level. However, chemical engineers responding to the survey reported a drop in salaries at both the bachelor's and master's level, and a slight increase at the doctoral level (Table 59). As has been true throughout the 1980s, increases in median salaries have been largely offset by the rising cost of living. After adjustment for changes in consumer prices, the median salary for all Ph.D. chemists is just 6% higher in 1985 than it was in 1980, and that for M.S. chemists is up a mere 5%. For chemists with no more than a bachelor's degree, this year's median is 4% less than it was five years ago (Charts 2 and 3).

Experience is a key factor affecting salaries. This is especially true during the first 20 to 30 years after undergraduate training. For example, the median salary for chemists whose highest degree is a B.S. and who earned that degree 20 to 24 years ago is 85% higher than that for chemists who obtained their degree in the past 12 months. However, the median for B.S. chemists who graduated 40 or more years ago is just 15% above that for B.S. chemists who are 20 to 24 years out of undergraduate school (Table 60).

In general, salaries tend to be lower for women than men. In part, this is because women are less likely to be among the more experienced chemists whose income is higher. Less than a third of women chemists working in industry earned their B.S. degree 15 or more years ago, but nearly two thirds of the men did so. However, even when the data are adjusted to compensate for differences in experience, men's salaries on the average are 10 to 20 percent higher than those of women, depending on their employer. The difference is greatest among older chemists. Median salaries for men and women working in industry are similar for those who received their undergraduate degree less than 10 years ago. However for chemists who are 25 to 29 years out of undergraduate school, the divergency in median salaries ranges from an $800 a year advantage for men with a B.S. or M.S. degree to a $10,300/year advantage at the Ph.D. level compared to women with the same degrees (Table 61). The salary discrepancy between men and women holds regardless of type of employer as shown in Tables 62 and 63.

Managers in general earn more than chemists involved with research and development or in production and quality control. As shown in Table 64, regardless of sex, those chemists engaged in the management of R & D reported the highest salaries at all three degree levels. Not surprisingly, women reported lower median salaries than men regardless of work function.

In industry, polymer chemists are more likely to be at the top of the salary scale and biochemists at the bottom. Interestingly, in the lowest paying specialty of biochemisty, the salary gap between men and women is the smallest (Table 65). Chemists working for petroleum firms get paid more on average than their colleagues in other types of companies (Table 66).

Chemists employed in private industry earn more working in the West South Central and the least in the West North Central (Table 67). An analysis of salaries of non-academic chemists for selected states finds those working in Florida reported the lowest salaries while those working in in New Jersey earned the highest salaries (Table 68).

Not surprisingly, salaries are highest for those chemists who supervise more subordinates as shown in Table 69. Salaries of non-academic chemical engineers by degree level and years since receipt of the bachelor's degree are shown in Table 70.

The annual salary survey conducted by **INDUSTRIAL CHEMICAL NEWS** of some 100 companies in a variety of industries that employ chemists, as well as data from some 1,200 industrial chemists, found that salary increases in the 1984-85 period averaged 8.2% for chemists, considerably stronger than the 6.9% average increase in the previous year. But, as in the 1983-84 survey, about 5% of the chemists reported no raises this year. Salaries by degree level and years of experience for these industrial chemists are shown in Table 71.

A number of factors influence chemists' salaries, including geographic region, work function and type of employer. Although more industrial chemists were employed in the Northeast area, those employed in the Southwest area reported the highest salaries ($43,920), while those employed in the Northwest reported the lowest ($32,956) (Table 72). Those chemists involved in quality analysis have the lowest average salaries, $33,667, while highest average salary is among chemists working in R & D management, $53,050, (Table 73). Similar ups and downs occur among chemists working in various industries. The average salary for government chemists is the lowest at $34,615, while those working in the rubber industry report the highest average salary, $44,387 (Table 74). As in previous surveys by ICN, the average salary of women chemists ($40,406) was some $1,500 less than for men.

The fourth biennial demographic survey of members of the **American Institute of Chemists** found an overall median salary of $45,000 in 1984, up 7.1% from the 1982 survey. Bachelor's reported the lowest increase of 4.8% with a new 1984 median of $33,000. Those with masters degrees did slightly better with a 5.3% increase to a median salary of $40,000, while Ph.D.s reported an 8.9% increase to $49,000 in 1984. As expected, chemists earned the most working in industry regardless of degree level as shown in Table 75. Not unexpectedly, too, there were more AIC member bachelor's working in industry, 51.5%, than all other employer categories combined.

As was shown in the survey by the American Chemical Society of its membership, AIC found that chemical specialty has an effect on salary levels. Although chemical engineers who were members of the AIC reported the highest median salary, with the exception of the "other" category, among chemists at the doctoral level, physical chemists reported the highest salary while inorganic chemists reported the lowest (Table 76).Again, AIC found that chemists in management are paid the most, regardless of degree level, while those in teaching are paid the least, with the exception of the "other" category (Table 77).

Median annual salaries are highest for bachelor's level AIC members working in the New England area, for master's along the Atlantic seaboard, and for doctorates in the Pacific area (Table 78).

The 28th annual salary survey conducted by the **AMERICAN MATHEMATICAL SOCIETY** found that women were earning slightly higher salaries than men after one year of experience in teaching and/or research based on a 12-month period, but were earning less in all other employer categories Table 79).

The 1985 salary survey conducted by the **AMERICAN PSYCHOLOGICAL ASSOCIATION** presents data on more than 10,000 APA members. Doctoral psychologists, not including those employed in faculty positions, working in administration of human services and in applied psychology reported the highest median salary - $52,000, while those working in direct human services (school psychology) reported the lowest - $30,00. At the master's level, psychologists working in other administrative positions reported the highest salaries - $47,500 - while those working in school psychology reported the lowest - $27,818 (Table 80). Further breakdowns by years of work experience and type of position for doctoral and master's level psychologists are shown in Tables 81 and 82 respectively.

The median salary of members of the **AMERICAN INSTITUTE OF PHYSICS** member societies in 1983 was $40,000, according to **1983 SALARIES - SOCIETY MEMBERSHIP SURVEY.** Graduate physicsts continuing in the same principal work activity in 1983, earned the most working in administration at both the master's and doctoral level, while those employed in teaching earned the least (Table 83). Salaries of doctoral physicists by years since the Ph.D. are reported in Table 84.

Industrially employed Ph.D.s commanded the highest median salaries - $47,700, while academically employed Ph.D.s earned the least. The same was true for master's level physicists as shown in Tables 85 and 86.

Only a small percentage of AIP society members are women - less than 5% of the Ph.D.s and 6-8% of the bachelor's and master's. Women are more likely to work for secondary schools and nonprofit organizations and less likely to be employed by industry and national laboratories. Thus the salaries of women society members are lower on average than those of men partly because of the different employer distributions. Salary level differences between men and women range from 11% to 18%. In industry, where the ob-

served difference is greatest, it is largely an effect of differences in age. When age and degree level are statistically controlled, the salary differential in industry drops to 7% (Tables 87 and 88).

By geographic region, those Ph.D.s employed in the Pacific region reported the highest median annual salary - $44,700 - primarily because the west coast has the largest proportion of industrially employed Ph.D.'s in the country (41%). In contrast, the West North Central Division has the highest proportion of academically employed Ph.D. physicists in the nation (72%) and thus the overall median salary for Ph.D.s in this area was the lowest $34,900 - nearly $6,000 under the national median (Table 89).

Salaries vary widely among information systems and data processing personnel, according to the second annual survey of over 1,000 organizations and reported in **COMPENSATION IN THE MIS/DP FIELD** by **Abbott, Langer & Associates.** The top Management Information Systems (MIS/IS) officers reported a median salary of $45,000 and total compensation of $50,200 while junior key entry operators reported the lowest salary and total compensation - $12,000. Average and median salary and total compensation are reported for 44 MIS/dp jobs is Table 90.

A number of factors enter into salaries paid to information systems and data processing personnel. Generally, manufacturing employers pay the highest salaries regardless of job title as shown in Table 91. Other factors influencing salary are level of education (Table 92), length of experience (Table 93) and geographic area (94). In general, the more education one has, the higher the salary; the longer one works, the higher the salary; and being employed in the Northeastern or Pacific states earns a higher salary. In almost all job titles, women are paid less than their male counterparts as shown in Table 95.

Data processing salaries rose an average of almost 8% with data base systems managers leading the way (up 21%) from 1984 to 1985 accrording to the findings of **INFOSYSTEMS'** 27th annual salary survey. It was also a good year for lead and senior analysts/programmers, most of whom received salary increases ranging from 9 to 17 percent. The 1985 survey is based on responses from 790 firms drawn from the top 50 U.S. metropolitan areas. Respondents reported on 8,863 full-time positions. Average and median salaries for data processing personnel by job title are shown in Table 96.

Geographic location had a significant influence on salary levels. Firms in regions of the country lacking in major metropolitan areas reported notably lower salaries than regions with higher concentrations of urban areas. Average salaries for data processing personnel in the West North Central states (Minnesota, North Dakota, South Dakota, Nebraska and Iowa) ranked last among geographic areas in 21 of the 36 job titles. Salary levels in East south Central states (Kentucky, Tennessee, Mississippi and Alabama) were below the national average for all but two job titles (Table 97).

Public utilities, insurance firms and DP service companies were among the highest paying employers. DP personnel in the field of education continued to register the lowest pay levels (Table 98).

The **ASSOCIATION OF DATA PROCESSING SERVICES ORGANIZATION (ADAPSO)** and **A. S. HANSEN, Inc.** report salaries of selected data processing personnel in their **1985 ADAPSO COMPENSATION SURVEY.** Salaries vary by level of responsibility and geographic area. For example, Lead operating systems/software programmer/analysts earned the highest salaries in the Southeast area and the lowest in the midwest as did software engineers. Salaries for selected data processing personnel by level of responsibility and geographic area are shown in Tables 99 through 105.

The **ADMINISTRATIVE MANAGEMENT SOCIETY** reports that salaries for data processing employees rose 5% for the second year in a row in 1984. The third annual study of 20 EDP positions covering 57,479 employees in 2,360 companies in 114 major cities throughout the United States and Canada shows software systems programming managers at the top of the list, averaging $40,400, up 5.8% over 1983. Application programming managers are second at $40,000, up 3.4% during the year. The lowest percentage increase from 1983 to 1984 was registered by computer operations managers who received increases of only 1.1% (Table 106). Data processing personnel were generally paid more by utility businesses with applications programming managers reporting the highest median salary of $47,500 working in this area (Table 108). Salaries by geographical area and occupational title are shown in Table 107.

Salary levels for computer professionals continued to increase across the board during 1984, according to the **1985 COMPUTER SALARY SURVEY AND CAREER PLANNING GUIDE** by **SOURCE EDP.** The 1985 survey is based on an analysis of more than 48,000 computer professionals assisted by SOURCE EDP during 1984. Salaries for non-management positions usually depend upon length of professional experience as shown in Table 109. Salaries for management positions will often depend upon the size of computer system installed or upon the size of staff managed. Management computer professionals earn the highest salaries working in large computer system firms and the lowest working in small computer system firms. The highest compensation was reported for computing system directors working in large computer systems - $71,500 (Table 110).

The sixteenth annual edition of **POSITION CLASSIFICATION AND PAY IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES** by the **U. S. Department of Health and Human Resources, Public Health Services** presents average annual salaries for selected technical positions. The 1985 survey finds Alaska again leading all states in salaries paid to laboratory technicians, microbiologists and laboratory directors (Table 111). Average salaries in 1985 ranged from a low of $11,081 for entering lab aides to a high of $42,133 for lab directors (Table 112)

The sixth annual edition of **COMPENSATION IN THE ACCOUNTING/FINANCIAL FIELD** by **Abbott, Langer & Associates** found that annual median salaries ranged from a high of $60,770 for chief financial officers to a low of $22,800 for non-supervisory accountants and auditors as of October 1984. Chief financial officers earned the highest in New York City & vicinity while non-supervisory accountants earned the highest in the Mountain States (Table 114). By type of organization, accounting/financial personnel generally earned the most working for utilities and the least in educational institutions (Table 113). Those accounting/financial personnel holding a MA/MS degree reported the highest average salaries as shown in Table 115.

Women working in managerial and professional occupations reported median weekly earnings during the first quarter of 1985 of $384 - $194 or 51.3% less than the $578 reported by men working in these occupations during the same period, according to data from the **U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS.** Regardless of occupation - from managerial and professional to technical, sales and administrative support - women reported lower median weekly earnings than did men in similar positions (Table 116).

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the U.S., 1983, NSF 85-303.

TABLE 33

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1983

FIELD	TOTAL	TYPE OF EMPLOYER								
		Business & Industry	EDUCATIONAL INSTITUTIONS				Hospital/ Clinic	Non-Profit Organization	Federal Government	State Government
			Total	4-Year Colleges	2-Year Colleges	Elem./Sec. School				
ALL FIELDS	**$40,100**	**$47,000**	**$36,200**	**$36,300**	**$32,000**	**$31,300**	**$34,700**	**$39,800**	**$44,700**	**$34,000**
PHYSICAL SCIENTISTS	**42,300**	**45,900**	**37,200**	**37,700**	**32,400**	**25,300**	**42,500**	**40,500**	**44,300**	**30,000**
Chemists	41,900	45,600	35,600	35,900	32,700	26,600	40,600	40,700	42,900	26,600
Physicists/Astronomers	42,900	48,300	40,100	40,300				40,500	45,700	
MATHEMATICAL SCIENTISTS	**36,600**	**42,700**	**35,600**	**35,800**	**31,300**			**42,100**	**45,500**	
Mathematicians	36,400	43,600	35,400	35,700	31,300				44,600	
Statisticians	37,400	40,000	36,300	36,300					46,700	
COMPUTER/INFO. SPECIALISTS	**40,400**	**42,700**	**37,000**	**37,400**				**43,800**	**45,900**	
ENVIRONMENTAL SCIENTISTS	**40,900**	**48,500**	**36,200**	**36,400**				**43,500**	**45,900**	**30,400**
Earth Scientists	41,500	49,200	36,600	36,800				48,200	46,100	29,900
Oceanographers	36,700		31,700	31,800					41,500	
Atmospheric Scientists	41,600	48,600	34,700	34,700					48,000	
ENGINEERS	**46,600**	**49,900**	**42,500**	**42,500**				**48,100**	**46,500**	
LIFE SCIENTISTS	**37,300**	**43,700**	**35,700**	**35,700**	**34,600**	**25,300**	**37,300**	**36,600**	**42,700**	**36,100**
Biological Scientists	36,200	41,800	34,800	34,800	33,600		37,400	35,700	42,000	33,700
Agricultural Scientists	37,900	40,100	35,900	35,800				38,600	43,400	33,000
Medical Scientists	41,200	50,700	38,900	39,100			37,200	40,300	49,000	39,000
PSYCHOLOGISTS	**35,800**	**48,000**	**33,600**	**33,600**	**33,200**	**34,600**	**32,700**	**29,800**	**43,800**	**35,400**
SOCIAL SCIENTISTS	**36,000**	**45,400**	**34,400**	**34,600**	**30,800**			**36,000**	**45,600**	**32,000**
Economists	41,400	52,100	37,600	37,500					48,900	
Sociologists/Anthropologists	32,100	36,300	31,800	31,900						
Other Social Scientists	35,000	35,600	33,800	33,900	31,000			37,300	44,700	31,900

NOTE: Median salaries computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 34

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN BUSINESS AND INDUSTRY BY FIELD, 1979-83

FIELD	1979				1981				1983			
	Number	%	Percent of total employed	Median annual salary	Number	%	Percent of total employed	Median annual salary	Number	%	Percent of total employed	Median annual salary
ALL FIELDS	82,858	100.0	26.4	$33,700	99,126	10.0	28.8	$40,300	113,463	100.0	30.7	$47,000
PHYSICAL SCIENTISTS	24,989	30.2	41.5	33,100	27,409	27.7	43.4	39,900	28,748	25.3	44.9	45,900
Chemists	20,533	24.8	51.8	32,900	22,260	22.5	53.1	39,900	22,525	19.9	54.5	45,600
Physicists/Astronomers	4,456	5.4	21.7	33,900	5,149	5.2	24.3	39,900	6,223	5.5	27.4	48,300
MATHEMATICAL SCIENTISTS	1,469	1.8	9.6	31,500	1,616	1.6	10.4	37,000	2,027	1.8	12.4	42,700
Mathematicians	1,177	1.4	9.2	31,400	1,154	1.2	8.9	36,700	1,512	1.3	11.1	43,600
Statisticians	292	0.4	12.1		462	0.5	18.2	37,700	515	0.5	18.5	40,000
COMPUTER/INFO. SPECIALISTS	3,669	4.4	54.9	29,700	5,228	5.3	57.7	36,300	6,819	6.0	56.1	42,700
ENVIRONMENTAL SCIENTISTS	4,246	5.1	29.1	34,000	4,705	4.7	29.6	40,700	5,154	4.5	31.3	48,500
Earth Scientists	3,760	4.5	33.9	34,100	4,130	4.2	34.4	42,400	4,596	4.1	36.7	49,200
Oceanographers	222	0.3	13.4		184	0.2	10.3		217	0.2	12.5	
Atmospheric Scientists	264	0.3	14.4		391	0.4	18.4	38,100	341	0.3	15.5	48,600
ENGINEERS	26,517	32.0	52.7	35,000	31,788	32.1	55.7	41,300	34,500	30.4	56.1	49,900
LIFE SCIENTISTS	11,145	13.5	14.1	33,000	13,123	13.2	15.5	39,300	16,444	14.5	17.7	43,700
Biological Scientists	4,298	5.2	9.4	32,700	5,302	5.3	10.7	36,600	7,730	6.8	14.0	41,800
Agricultural Scientists	3,062	3.7	23.9	29,500	3,097	3.1	22.9	35,500	3,583	3.2	24.6	40,100
Medical Scientists	3,785	4.6	18.5	37,600	4,724	4.8	21.7	45,700	5,131	4.5	22.2	50,700
PSYCHOLOGISTS	7,077	8.5	18.7	38,100	10,122	10.2	23.6	40,300	13,020	11.5	27.9	48,000
SOCIAL SCIENTISTS	3,746	4.5	7.4	33,000	5,135	5.2	9.2	40,000	6,751	5.9	11.4	45,400
Economists	1,890	2.3	13.5	37,100	2,573	2.6	16.1	44,000	2,779	2.4	16.4	52,100
Soc./Anthropologists	290	0.3	2.8		478	0.5	4.3	28,300	801	0.7	6.6	36,300
Other Social Scientists	1,566	1.9	6.0	30,100	2,084	2.1	7.3	35,400	3,171	2.8	10.5	35,600

NOTE: Percents may not add to 100 because of rounding. Median salaries computed for full-time civilians only. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the U.S., 1983, NSF 85-303.

TABLE 35

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1983

FIELD	Total	RESEARCH & DEVELOPMENT				MANAGEMENT OR ADMIN.			Teaching	Consulting	Sales Prof. Serv.	Other
		Total	Basic Research	Applied Research	Development	Total	of R&D	Other than R&D				
ALL FIELDS	**$40,100**	**$40,500**	**$37,900**	**$41,300**	**$43,100**	**$50,600**	**$53,800**	**$45,000**	**$34,800**	**$46,500**	**$38,000**	**$40,500**
PHYSICAL SCIENTISTS	**42,300**	**41,700**	**40,500**	**42,500**	**43,400**	**52,700**	**53,600**	**49,500**	**35,200**	**55,900**	**44,600**	**44,400**
Chemists	41,900	41,100	40,100	42,000	42,800	52,000	53,100	45,800	34,200		45,500	43,700
Physicists/Astronomers	42,900	42,400	40,800	43,700	45,200	53,900	55,400	52,600	36,700		42,200	45,600
MATH. SCIENTISTS	**36,600**	**39,800**	**36,900**	**42,400**	**38,200**	**46,100**	**50,500**	**44,100**	**34,000**	**42,300**	**37,800**	**31,000**
Mathematicians	36,400	39,100	36,800	43,100	38,900	44,500	54,800	43,500	33,900			37,000
Statisticians	37,400	41,300		41,600		50,000			35,300	41,900		
COMPUTER/INFO. SPEC.	**40,400**	**40,600**	**41,300**	**43,600**	**38,900**	**51,400**	**53,100**	**49,800**	**36,300**	**45,700**	**40,200**	**31,400**
ENVIRON. SCIENTISTS	**40,900**	**40,600**	**39,800**	**41,800**	**35,800**	**51,800**	**52,700**	**48,300**	**35,900**	**46,300**	**37,800**	**40,000**
Earth Scientists	41,500	42,600	41,300	44,100	35,900	51,600	53,800	47,300	35,800	45,300	42,400	39,900
Oceanographers	36,700	32,800	32,900	30,500		47,900	45,900		31,300			
Atmospheric Scientists	41,600	37,300	40,100	36,900		56,200	56,200		36,800			
ENGINEERS	**46,600**	**45,100**	**42,000**	**45,100**	**45,400**	**55,600**	**56,100**	**53,700**	**40,300**	**48,900**	**50,000**	**47,900**
LIFE SCIENTISTS	**37,300**	**36,600**	**36,200**	**37,100**	**37,500**	**49,800**	**52,200**	**46,000**	**34,200**	**40,600**	**42,600**	**36,800**
Biological Scientists	36,200	36,200	35,900	37,400	36,300	50,100	50,800	46,900	33,200	41,100	39,500	36,600
Agricultural Scientists	37,900	36,800	39,500	36,400	36,500	48,700	49,400	48,100	35,500	37,800	36,300	32,700
Medical Scientists	41,200	39,300	37,900	40,300	40,500	49,600	56,800	44,700	36,600	43,700	50,400	41,700
PSYCHOLOGISTS	**35,800**	**36,900**	**35,600**	**37,600**		**40,400**	**49,800**	**39,700**	**33,100**	**40,100**	**35,700**	**33,000**
SOCIAL SCIENTISTS	**36,000**	**37,100**	**35,300**	**38,800**	**46,800**	**43,300**	**50,900**	**41,600**	**33,300**	**50,000**	**40,600**	**40,300**
Economists	41,400	42,200	36,600	42,900		54,500	59,000	52,300	36,300	50,600	46,600	61,000
Soc./Anthropologists	32,100	32,600	34,600	30,700		37,900		37,800	30,700			36,300
Other Social Scientists	35,000	36,100	35,500	37,300		41,300	48,200	40,100	32,700	42,700	35,800	35,000

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the U.S., 1983, NSF 85-303.

TABLE 36

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND GEOGRAPHIC AREA, 1983

FIELD	Total	GEOGRAPHIC AREA								
		New England	Middle Atlantic	E. North Central	W. North Central	South Atlantic	E. South Central	W. South Central	Mountain	Pacific
ALL FIELDS	**$40,100**	**$38,500**	**$41,400**	**$38,900**	**$36,700**	**$40,900**	**$35,700**	**$40,300**	**$40,200**	**$41,500**
PHYSICAL SCIENTISTS	**42,300**	**41,600**	**44,100**	**40,900**	**39,000**	**42,800**	**37,400**	**40,900**	**42,500**	**44,800**
Chemists	41,900	42,900	43,600	41,000	38,300	40,700	39,700	41,200	38,800	44,500
Physicists/Astronomers	42,900	40,300	45,000	40,800	39,500	45,000	36,700	36,900	43,500	45,000
MATHEMATICAL SCIENTISTS	**36,600**	**34,800**	**39,600**	**36,100**	**31,400**	**38,400**	**31,400**	**36,800**	**37,900**	**38,000**
Mathematicians	36,400	36,500	39,500	35,800	29,500	36,300	30,600	36,700	39,700	38,200
Statisticians	37,400		45,500	37,300	36,300	42,000				37,200
COMPUTER/INFO. SPEC.	**40,000**	**36,800**	**42,600**	**40,100**	**38,400**	**40,100**	**39,500**	**38,700**	**35,700**	**41,600**
ENVIRONMNTAL SCIENTISTS	**40,900**	**36,900**	**37,200**	**37,300**	**36,900**	**44,600**	**36,700**	**45,900**	**45,400**	**40,500**
Earth Scientists	41,500	36,600	38,800	37,600	39,900	45,100	36,300	46,400	44,900	40,500
Oceanographers	36,700	38,900	28,600			38,500				37,400
Atmospheric Scientists	41,600		40,100			48,400			47,000	44,500
ENGINEERS	**46,600**	**45,700**	**49,100**	**44,100**	**44,900**	**47,500**	**42,800**	**47,800**	**46,500**	**47,600**
LIFE SCIENTISTS	**37,300**	**36,000**	**38,900**	**38,300**	**36,800**	**39,200**	**34,300**	**37,600**	**37,000**	**36,900**
Biological Scientists	36,200	35,100	37,000	37,500	36,000	36,800	33,700	35,500	34,000	36,400
Agricultural Scientists	37,900	39,500	36,400	38,200	36,700	39,700	34,400	38,700	37,200	37,500
Medical Scientists	41,200	37,400	45,500	40,200	42,300	44,000	36,500	42,700	37,400	39,900
PSYCHOLOGISTS	**35,800**	**33,600**	**36,600**	**34,900**	**35,700**	**35,900**	**34,100**	**35,700**	**34,800**	**38,700**
SOCIAL SCIENTISTS	**36,000**	**36,400**	**35,600**	**35,000**	**32,300**	**40,300**	**33,500**	**34,300**	**36,300**	**37,800**
Economists	41,400	41,100	40,300	39,700	40,000	47,900	35,500	43,100	38,000	44,400
Soc./Anthropologists	32,100	34,200	32,100	31,300	28,600	31,500	31,000	30,800	35,500	35,400
Other Social Scientists	35,000	35,000	35,100	34,100	30,400	37,400	32,100	32,300	34,300	36,900

NOTE: All median salaries were computed only for full-time employed civilians.
No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 37

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE, 1983

FIELD	Total	YEARS OF PROFESSIONAL EXPERIENCE										
		1 or Less	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 or More	No Report
ALL FIELDS	$40,100	$29,500	$30,300	$33,100	$39,000	$42,800	$44,800	$46,700	$50,000	$50,600	$53,900	$40,500
PHYSICAL SCIENTISTS	42,300	33,400	34,000	36,400	40,500	45,100	45,800	49,600	51,700	52,500	59,200	44,200
Chemists	41,900	33,300	34,400	36,800	40,400	44,700	45,600	49,400	51,200	52,700	60,100	44,100
Physicists/Astronomers	42,900		31,800	35,700	40,700	45,300	46,400	50,100	52,200	51,900	57,100	44,500
MATHEMATICAL SCIENTISTS	36,600		26,400	30,500	35,300	39,100	40,800	42,800	46,200	46,600		37,300
Mathematicians	36,400		26,300	29,900	35,000	38,000	39,400	42,900	45,900	46,500		36,800
Statisticians	37,400		26,800	32,000	35,700	44,700	45,700					49,800
COMPUTER/INFO. SPECIALIST	40,400		35,400	34,900	40,900	42,700	47,500	50,900	50,200			42,500
ENVIRONMENTAL SCIENTISTS	40,900		29,800	34,800	39,400	45,200	49,800	51,500	51,100	58,200	57,000	40,000
Earth Scientists	41,500		35,200	35,600	39,400	44,900	50,000	50,200	55,200	58,400	50,800	40,500
Oceanographers	36,700			30,800	37,300	44,500						33,600
Atmospheric Scientists	41,600			35,100	41,200	48,500						
ENGINEERS	46,600	37,400	36,700	40,700	45,700	50,100	49,900	51,600	53,500	53,700	60,300	48,300
LIFE SCIENTISTS	37,300	25,600	27,500	31,000	36,500	40,400	42,400	45,500	48,400	50,200	50,900	39,400
Biological Scientists	36,200	25,900	26,100	30,300	36,000	39,300	41,600	45,400	45,800	50,000	51,700	36,300
Agricultural Scientists	37,900		28,200	31,800	35,800	42,000	40,900	43,800	47,000	46,900		37,900
Medical Scientists	41,200	22,900	30,400	35,200	39,800	44,900	46,600	48,300	55,100	52,400	54,500	45,400
PSYCHOLOGISTS	35,800		26,100	30,600	35,700	39,200	42,100	44,700	45,300	44,700	45,800	35,800
SOCIAL SCIENTISTS	36,000		25,500	28,800	35,300	38,100	40,200	42,700	47,700	48,800	46,300	35,900
Economists	41,400		29,700	33,600	42,200	46,600	46,500	45,000	52,900	46,600		40,400
Sociologists/Anthropologists	32,100		23,600	26,700	32,600	32,500	40,200	41,000	38,600			33,200
Other Social Scientists	35,000		24,300	27,200	33,300	36,900	36,800	41,000	46,500	50,600	46,100	33,700

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 38

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE, 1983

FIELD	Total	AGE									
		Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
ALL FIELDS	**$40,100**	**$30,300**	**$31,600**	**$35,900**	**$40,400**	**$44,200**	**$44,700**	**$46,200**	**$48,500**	**$47,000**	**$50,900**
PHYSICAL SCIENTISTS	**42,300**	**33,800**	**35,300**	**38,600**	**42,100**	**45,700**	**46,300**	**50,700**	**50,300**	**55,300**	
Chemists	41,900	33,600	35,400	38,800	41,800	45,700	46,300	52,000	50,200	55,800	
Physicists/Astronomers	42,900	35,300	34,700	38,300	42,600	45,800	46,300	49,100	51,100	53,200	
MATHEMATICAL SCIENTISTS	**36,600**	**26,000**	**27,700**	**33,400**	**36,600**	**39,300**	**42,400**	**44,700**	**44,800**	**45,800**	
Mathematicians	36,400	25,600	27,800	33,100	36,300	38,400	41,500	44,400	44,400	45,600	
Statisticians	37,400		27,500	33,700	40,900	45,100	45,000				
COMPUTER/INFO. SPECIALISTS	**40,400**		**37,100**	**38,400**	**40,100**	**42,100**	**44,500**	**60,100**	**42,900**		
ENVIRONMENTAL SCIENTISTS	**40,900**		**32,000**	**36,900**	**42,000**	**44,700**	**52,000**	**46,800**	**51,700**	**47,700**	
Earth Scientists	41,500		35,100	38,600	41,400	44,300	51,900	48,800	51,800	54,700	
Oceanographers	36,700		26,900	32,100	37,500	44,700					
Atmospheric Scientists	41,600		30,000	34,600	48,400	49,600					
ENGINEERS	**46,600**	**37,200**	**38,100**	**43,500**	**48,400**	**50,800**	**50,300**	**51,700**	**56,100**	**48,100**	
LIFE SCIENTISTS	**37,300**	**27,200**	**29,000**	**32,500**	**36,900**	**41,300**	**42,700**	**45,100**	**47,000**	**46,300**	**50,200**
Biological Scientists	36,200	26,100	28,600	31,000	36,100	40,900	41,200	44,700	44,200	46,300	
Agricultural Scientists	37,900		29,200	33,000	36,700	40,100	42,700	43,600	45,400	42,500	
Medical Scientists	41,200		30,200	36,300	41,700	45,900	46,700	49,900	52,400	56,500	
PSYCHOLOGISTS	**35,800**	**25,100**	**28,100**	**31,600**	**36,800**	**39,500**	**40,800**	**43,300**	**44,000**	**44,300**	
SOCIAL SCIENTISTS	**36,000**		**27,500**	**30,800**	**36,000**	**39,400**	**39,600**	**41,700**	**46,000**	**45,300**	
Economists	41,400		33,000	36,000	43,200	47,200	44,500	44,300	51,800	46,300	
Sociologists/Anthropologists	32,100		23,700	29,300	32,700	33,600	37,100	37,400	40,400	48,800	
Other Social Scientists	35,000		25,800	30,400	35,200	39,400	38,100	41,300	45,500	39,400	

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Research Council, Science, Engineering and Humanities Doctorates in the U.S., 1983 Profile.

TABLE 39

MEDIAN ANNUAL SALARIES OF FULL-TIME EMPLOYED DOCTORAL SCIENTISTS & ENGINEERS BY FIELD OF DOCTORATE, YEARS SINCE Ph.D. AND SEX, 1983

FIELD OF DOCTORATE	YEARS SINCE DEGREE														TOTAL	
	5 or Less		6-10		11-15		16-20		21-25		26-30		Over 30			
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
ALL FIELDS	**$32,100**	**$27,600**	**$36,700**	**$31,100**	**$42,000**	**$34,900**	**$45,200**	**$36,900**	**$48,900**	**$40,300**	**$51,600**	**$42,600**	**$54,200**	**$44,000**	**$40,900**	**$31,800**
Mathematical Scientists	27,600	29,400	35,000	32,300	37,800	35,800	41,600	36,200	48,600	37,100	51,200		56,600		38,400	33,500
Computer Scientists	38,000	39,800	45,300	45,100	49,700										42,300	41,100
Physicists/Astronomers	36,800	34,300	38,800	38,100	43,300	38,200	45,300	40,800	49,700	41,000	57,300		55,200		44,100	38,100
Chemists	35,300	33,700	39,100	35,400	43,000	34,600	46,500	34,000	50,100	38,400	51,800	36,800	53,800	42,300	43,700	35,000
Earth/Environmental Sciences	32,100	32,600	36,900	35,100	44,600	35,700	47,800	42,000	52,000		53,300		55,500		40,800	35,600
Engineers	37,700	36,300	44,200	43,500	48,600	45,000	51,500		55,100		59,100		58,200		46,700	39,700
Agricultural Scientists	28,700	27,500	34,700	30,600	39,000	33,700	42,600		43,800		47,000		50,500		38,000	29,200
Medical Scientists	33,000	30,000	38,900	34,300	44,500	36,600	50,600	45,500	55,200	40,600	55,400		55,900		42,500	33,000
Biological Scientists	27,100	25,200	33,200	29,600	38,000	33,600	42,700	34,600	46,800	40,700	49,300	43,200	53,800	42,400	38,100	30,700
Psychologists	28,700	26,200	33,800	30,600	39,900	34,700	40,600	39,700	46,100	41,600	50,000	43,000	52,100	45,500	37,300	30,800
Social Scientists	28,000	26,700	32,800	31,600	38,200	35,900	43,900	37,000	46,100	42,400	49,000	40,100	51,300	46,100	36,700	31,000

NOTE: Median salaries were computed only for Ph.D.s employed full-time, excluding those in the U.S. military. Academic salaries were multiplied by 11/9 to adjust for a full-year scale. Medians were not reported for cells with less than 20 cases reporting salary or with a sampling error of more than ± $2,000.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303

TABLE 40

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1983

FIELD	Total	SEX		RACE				
		Men	Women	White	Black	Am. Indian	Asian	Hispanic
ALL FIELDS	**$40,100**	**$40,800**	**$31,700**	**$40,200**	**$37,000**	**$36,200**	**$40,100**	**$37,200**
PHYSICAL SCIENTISTS	**42,300**	**42,800**	**35,200**	**42,700**	**40,100**		**40,400**	**42,400**
Chemists	41,900	42,600	34,700	42,400	38,300		40,000	41,100
Physicists/Astronomers	42,900	43,200	37,400	43,000	50,100		42,000	45,000
MATHEMATICAL SCIENTISTS	**36,600**	**36,900**	**32,200**	**36,600**	**36,600**		**36,400**	**41,800**
Mathematicians	36,400	36,700	31,600	36,400	36,800		37,200	41,900
Statisticians	37,400	37,900	34,400	38,000			33,000	
COMPUTER/INFO. SPEC.	**40,400**	**40,900**	**33,400**	**40,400**			**40,300**	**36,200**
ENVIRON. SCIENTISTS	**40,900**	**41,300**	**35,300**	**40,800**			**43,800**	**40,300**
Earth Scientists	41,500	41,900	36,300	41,000			45,200	40,600
Oceanographers	36,700	37,500	31,600	36,700				
Atmospheric Scientists	41,600	42,000	34,000	42,000				
ENGINEERS	**46,600**	**46,800**	**39,200**	**47,700**	**42,500**		**44,900**	**39,500**
LIFE SCIENTISTS	**37,300**	**39,000**	**31,200**	**37,600**	**36,300**		**35,200**	**34,600**
Biological Scientists	36,200	37,100	30,800	36,400	34,600		34,700	34,900
Agricultural Scientists	37,900	38,200	29,100	38,200			33,700	28,400
Medical Scientists	41,200	45,000	32,700	41,700	39,500		37,000	42,200
PSYCHOLOGISTS	**35,800**	**37,100**	**30,800**	**35,900**	**33,200**		**32,900**	**36,000**
SOCIAL SCIENTISTS	**36,000**	**36,700**	**30,700**	**36,100**	**36,700**		**33,500**	**35,500**
Economists	41,400	42,200	34,600	41,700	39,500		38,000	40,400
Soc./Anthropologists	32,100	33,400	29,800	32,500	29,600		29,800	33,900
Other Social Scientists	35,000	35,700	30,800	35,100	38,900		31,300	34,900

NOTE: All median salaries were computed only for full-time employed civilians.
No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1984, In press.

TABLE 41

1984 MEDIAN ANNUAL SALARIES OF 1982/83 SCIENCE/ENGINEERING BACCALAUREATE GRADUATES* BY FIELD OF DEGREE, S/E EMPLOYMENT STATUS AND SEX

FIELD OF DEGREE	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	$20,900	$23,800	$16,000	$24,000	$25,000	$20,000	$15,000	$17,500	$14,000
Physical Sciences	20,000	21,000	18,000	20,000	21,000	18,700	17,200	19,000	13,000
Chemistry	18,700	20,000	18,000	19,100	20,300	18,500	17,200	18,500	
Physics/Astronomy	25,000	25,300		25,300	25,300				
Other Physical Sciences	19,000	20,000		17,000	19,000				
Math/Statistics	22,400	22,500	21,300	23,800	24,000	23,600	16,500	19,000	10,0000
Computer Sciences	25,700	26,000	25,000	25,900	26,000	25,300	22,000	23,500	
Environmental Sciences	16,000	17,500	13,800	18,500	19,100	15,600	13,000	13,000	12,000
Engineering	27,000	27,000	26,700	27,200	27,300	27,000	22,900	22,900	25,000
Life Sciences	15,000	16,100	14,000	15,000	16,000	14,200	15,000	16,800	12,000
Biology	15,000	16,000	15,000	15,000	16,400	15,000	15,000	16,000	14,000
Agricultural Sciences	15,000	16,500	12,000	15,000	16,000	12,000	15,000	17,300	10,000
Psychology	13,800	16,000	12,500	13,600	16,000	12,000	14,000	16,200	13,000
Social Sciences	16,000	17,500	15,000	17,700	18,000	16,500	15,000	16,500	14,300
Economics	18,500	19,200	17,000	20,000	20,000		18,000	18,500	16,600
Sociology/ Anthropology	14,000	17,000	13,200	15,000			14,000		13,000
Other Social Sciences	15,400	15,500	15,300	16,500	17,000	15,000	15,000	15,000	15,600

*Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with less than 20 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1984, In press.

TABLE 42

1984 MEDIAN ANNUAL SALARIES OF 1982/83 SCIENCE/ENGINEERING MASTERS' DEGREE GRADUATES*
BY FIELD OF DEGREE, S/E EMPLOYMENT STATUS AND SEX

FIELD OF DEGREE	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	$28,000	$30,000	$22,500	$30,000	$30,500	$25,000	$19,000	$20,100	$17,000
Physical Sciences	27,900	28,000	26,000	27,600	28,000	26,000	29,300		
Chemistry	27,600	27,600	28,000	27,600	27,500	27,600			
Physics/Astronomy	28,400	29,500		29,000	30,000				
Other Physical Sciences	26,000	28,100		26,000	28,000				
Math/Statistics	28,900	30,000	27,500	28,900	29,300	28,000			
Computer Sciences	34,500	35,000	30,600	34,700	35,000	31,000			
Environmental Sciences	30,000	31,000	24,000	30,300	31,200	27,000			
Engineering	32,000	32,400	30,200	32,000	32,400	30,700	31,000	32,000	
Life Sciences	18,000	19,500	17,200	18,000	20,000	17,000	18,500	18,000	19,200
Biology	18,000	18,800	17,300	18,000	19,600	17,300	18,800	18,800	
Agricultural Sciences	19,000	20,000	16,400	19,000	20,000	15,900	18,000	18,000	
Psychology	18,600	20,000	17,500	21,000	20,000		16,500		15,000
Social Sciences	20,600	22,000	20,000	23,300	23,300	21,000	18,000	17,000	19,000
Economics	27,000	27,000		27,000	28,000				
Sociology/ Anthropology	20,000	19,500					22,000		
Other Social Sciences	19,200	20,000	19,000	22,000	23,300	19,000	16,300	16,000	19,000

* Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with fewer than 20 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1984, in Press.

TABLE 43

1984 MEDIAN ANNUAL SALARIES OF 1982/83 SCIENCE/ENGINEERING GRADUATES BY FIELD OF DEGREE AND TYPE OF EMPLOYER

FIELD OF DEGREE	TOTAL		TYPE OF EMPLOYER							
			Business & Industry		Educational Institutions		Federal Government		State & Local Governments	
	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's
TOTAL	$21,000	$28,000	$23,500	$31,600	$14,000	$20,000	$21,500	$27,500	$16,900	$21,000
Physical Sciences	20,000	28,000	21,500	30,000	15,000	17,600	20,000			
Chemistry	18,700	27,600	20,000	30,000						
Physics/Astronomy	25,000	28,400	27,000	30,000						
Other Physical Sciences	19,000	26,000	25,000	35,000						
Math/Statistics	22,400	29,000	24,000	32,500	15,000	22,000	21,000			
Computer Sciences	25,600	34,500	26,000	35,000	20,000	28,700	21,500		20,800	
Environmental Sciences	16,000	30,000	17,500	33,000	10,000	19,000	21,000	17,700	14,000	
Engineering	27,000	32,000	27,500	33,000	24,000	23,000	25,000	29,500	23,000	26,000
Life Sciences	15,000	18,000	15,600	22,800	13,900	16,800	17,200	17,200	15,000	19,300
Biology	15,000	18,000	16,500	24,000	13,900	16,800		17,000		17,000
Agricultural Sciences	15,000	19,000	15,000	21,000	13,800	16,500	17,100	21,000	15,600	19,500
Psychology	14,000	18,600	15,500	19,000	12,000				16,000	
Social Sciences	16,000	20,600	17,300	22,600	14,000	17,000	15,500		16,000	20,300
Economics	18,600	27,000	20,000	27,200						
Sociology/ Anthropology	14,000	20,000	14,200							
Other Social Sciences	15,500	19,000	15,600	22,000						20,000

*Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with less than 20 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1984, in Press.

TABLE 44

1984 MEDIAN ANNUAL SALARIES OF 1982/83 SCIENCE/ENGINEERING BACHELOR'S AND MASTERS DEGREE GRADUATES* BY FIELD OF STUDY, DEGREE LEVEL AND PRIMARY WORK ACTIVITY

FIELD OF STUDY	TOTAL		PRIMARY WORK ACTIVITY							
			Research & Development		Management/ Administration		Production Inspection		Rep/Stat/ Computing Act.	
	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's	Bachelor's	Master's
TOTAL	$20,900	$28,000	$26,000	$31,000	$18,000	$26,200	$20,800	$27,000	$23,400	$28,600
Physical Sciences	20,000	27,900	21,200	29,300		34,000	18,000	29,000	22,500	28,000
Chemistry	18,700	27,600	20,300	28,400			18,000			
Physics/Astronomy	25,000	28,400	26,000	31,000						
Other Physical Sciences	19,000	26,000		26,000						
Math/Statistics	22,400	28,900	25,200	30,000	16,500		18,000		24,000	
Computer Sciences	25,700	34,500	27,000	35,700	28,000	39,000	23,500		25,000	32,000
Environmental Sciences	16,000	30,000	22,000	31,900	16,000		15,500	32,400	15,600	19,500
Engineering	27,000	32,000	27,900	33,000	27,000	34,000	26,500	32,000	26,500	31,000
Life Sciences	15,000	18,000	15,000	18,000	16,500	22,000	15,400	17,600	15,000	22,000
Biology	15,000	18,000	15,000	17,300	17,000	24,000	16,500	17,600		
Agricultural Sciences	15,000	19,000	15,000	19,000	16,000	22,000	14,000	17,000	13,000	25,000
Psychology	13,800	18,600			16,000		11,600			
Social Sciences	16,000	20,600	15,000	21,500	17,000	21,400	15,000		18,000	24,000
Economics	18,500	27,000			19,000				20,000	
Sociology/ Anthropology	14,000	20,000								
Other Social Sciences	15,400	19,200			15,600	20,000				

*Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with less than 20 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1984, In press.

TABLE 45

1984 MEDIAN ANNUAL SALARIES OF 1982/83 SCIENCE/ENGINEERING GRADUATES*
BY FIELD OF EMPLOYMENT, DEGREE LEVEL AND SEX

FIELD OF EMPLOYMENT	TOTAL		MEN		WOMEN	
	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.
TOTAL	$24,000	$30,000	$25,000	$30,500	$20,000	$25,000
Physical Sciences	18,900	27,200	20,000	27,500	18,000	26,000
Chemistry	19,100	27,600	19,300	28,500	18,500	26,000
Physics/Astronomy		32,000		32,000		
Other Physical Sciences	16,400	24,000	17,500	26,000		17,600
Math/Statistics	21,000	28,100	22,000	29,300	18,000	26,000
Computer Sciences	25,800	33,000	26,000	34,000	25,000	30,000
Environmental Sciences	20,000	31,800	21,000	32,800	15,600	28,800
Engineering	27,500	32,100	27,500	32,500	27,000	30,000
Life Sciences	15,000	17,600	16,100	18,500	14,000	16,500
Biology	15,000	18,000	16,000	19,700	14,700	16,500
Agricultural Sciences	14,400	19,500	15,000	20,000	12,000	17,200
Psychology	13,000	20,000		20,000		
Social Sciences	15,000	21,100	15,500	23,000	14,700	20,000
Economics	18,000	28,000		28,000		
Sociology/ Anthropology	14,000					
Other Social Sciences	16,600	20,600	18,000	23,300	15,600	19,000

* Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with fewer than 20 respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984

TABLE 46

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1984

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical & Astronautical Engineering	(330) $2,292	(293) $2,587	(88) $2,917	(75) $2,985	(46) $3,254	(46) $3,385	(158) $3,659	(236) $3,897	(116) $3,884	(3,812) $3,201
Chemical Engineering	(99) 2,362	(122) 2,477	(54) 2,700	(32) 3,109	(22) 2,836	(26) 3,342	(22) 3,436	(34) 3,626	(27) 4,037	(1,228) 2,893
Civil Engineering	(6) 1,933	(7) 2,471	(5) 2,220	(1) 3,000	(3) 3,200	(1) 4,000	(3) 3,833	(6) 3,417	(3) 3,767	(118) 2,989
Electrical & Electronic Engineering	(2,065) 2,404	(1,646) 2,642	(785) 2,929	(482) 3,140	(332) 3,281	(395) 3,485	(509) 3,754	(738) 3,865	(363) 3,892	(20,116) 3,051
Industrial Engineering	(19) 2,168	(14) 2,364	(10) 2,720	(3) 2,400	(4) 2,750	(3) 2,933	(4) 3,050	(1) 3,800	(1) 3,300	(172) 2,645
Materials Engineering	(35) 2,194	(32) 2,409	(28) 2,629	(15) 2,753	(18) 2,811	(14) 3,129	(21) 3,319	(25) 3,504	(23) 3,387	(645) 3,032
Mechanical Engineering	(239) 2,287	(241) 2,479	(148) 2,635	(88) 2,988	(69) 3,000	(37) 3,132	(96) 3,429	(152) 3,632	(92) 3,777	(3,288) 2,972
Metallurgical Engineering	(19) 1,763	(18) 1,778	(6) 2,367	(8) 2,900	(8) 2,850	(3) 2,967	(7) 3,686	(9) 3,678	(7) 3,600	(243) 2,816
Mining & Petroleum Engineering	(6) 1,583	(13) 2,154	(3) 3,133	(6) 2,700	(4) 2,450	(3) 3,267	(4) 3,300	(3) 2,833	(5) 3,140	(142) 2,649
Nuclear & Reactor Engineering	(96) 2,325	(142) 2,423	(53) 2,708	(56) 2,943	(12) 3,292	(25) 3,364	(44) 3,573	(60) 2,792	(43) 3,951	(1,570) 3,092
Ocean Science Engineering	(14) 2,264	(11) 2,236	(10) 2,750	(5) 2,820	(3) 3,033	(3) 3,067	(7) 3,657	(6) 3,350	(3) 4,000	(148) 2,893
Total Engineering	(2,977) 2,360	(2,585) 2,580	(1,206) 2,848	(796) 3,068	(538) 3,179	(570) 3,424	(893) 3,661	(1,309) 3,809	(707) 3,857	(32,131) 3,046
Agricultural & Biological Sciences	(56) 1,266	(48) 1,477	(46) 1,785	(43) 2,158	(21) 2,243	(12) 2,250	(25) 2,360	(13) 2,677	(14) 2,514	(692) 1,901
Atmospheric, Earth, Marine & Space Sciences	(5) 1,900	(10) 1,770	(6) 2,367	(9) 2,222	(5) 2,320	(7) 2,671	(2) 2,750	(1) 2,200	(3) 3,500	(159) 2,373
Chemistry	(91) 1,609	(111) 1,886	(88) 2,141	(53) 2,351	(53) 2,557	(40) 2,603	(59) 2,710	(50) 3,160	(44) 3,359	(1,735) 2,444
Computer Sciences	(271) 2,307	(209) 2,527	(92) 2,686	(55) 2,965	(40) 3,180	(28) 3,089	(38) 3,508	(44) 3,548	(17) 3,900	(2,021) 2,713
Mathematics & Statistics	(25) 2,104	(17) 2,218	(20) 2,375	(19) 2,795	(13) 2,900	(17) 3,259	(32) 3,363	(26) 3,635	(15) 3,553	(532) 2,990
Physics	(26) 2,158	(40) 2,313	(23) 2,583	(15) 2,740	(12) 3,167	(16) 3,163	(42) 3,714	(56) 3,770	(27) 3,948	(815) 3,160
Economics	(13) 1,338	(6) 1,933	(2) 2,500	(2) 2,600	(5) 3,000		(2) 3,750	(3) 3,000	(1) 3,300	(122) 2,275

*Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984

TABLE 47

NUMBER AND MEAN MONTHLY SALARIES OF MASTER'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1984

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical & Astronautical Engineering	(10) $2,500	(21) $2,638	(36) $2,925	(32) $3,119	(38) $3,334	(34) $3,500	(112) $3,860	(106) $3,971	(75) $4,105	(1,461) $3,672
Chemical Engineering	(8) 2,288	(37) 2,430	(39) 2,787	(32) 3,063	(24) 3,150	(14) 3,393	(21) 3,619	(18) 4,183	(13) 4,092	(644) 3,217
Civil Engineering	(1) 2,100	(4) 2,425	(5) 2,580	(3) 2,833	(2) 3,200	(4) 3,450	(4) 3,700	(5) 3,760	(2) 3,550	(98) 3,215
Electrical & Electronic Engineering	(72) 2,601	(247) 2,777	(324) 3,093	(309) 3,296	(273) 3,419	(268) 3,712	(424) 3,936	(396) 4,088	(217) 4,190	(7,611) 3,598
Materials Engineering	(4) 2,400	(8) 2,588	(11) 2,709	(13) 2,946	(7) 3,343	(8) 3,250	(16) 3,506	(11) 3,973	(15) 3,687	(289) 3,321
Mechanical Engineering	(15) 2,540	(44) 2,543	(69) 2,691	(65) 2,980	(36) 3,100	(34) 3,524	(73) 3,674	(50) 3,814	(32) 3,728	(1,295) 3,321
Metallurgical Engineering	(1) 2,100	(7) 2,286	(8) 1,988	(15) 2,580	(4) 3,200	(5) 3,540	(5) 3,560	(10) 4,000	(7) 3,986	(166) 3,109
Nuclear & Reactor Engineering	(2) 2,300	(25) 2,544	(48) 2,719	(39) 2,923	(40) 3,318	(24) 3,508	(39) 3,600	(34) 3,918	(23) 3,978	(918) 3,375
Ocean Science Engineering		(5) 2,700	(9) 2,667	(4) 3,150	(8) 2,850	(5) 3,360	(2) 3,500	(5) 3,580	(2) 3,750	(113) 3,169
Total Engineering	(114) 2,542	(411) 2,674	(566) 2,929	(535) 3,149	(453) 3,337	(412) 3,615	(709) 3,846	(649) 4,032	(397) 4,076	(12,996) 3,510
Agricultural & Biological Sciences	(1) 1,200	(19) 1,558	(40) 1,878	(33) 2,139	(27) 2,204	(16) 2,350	(18) 2,972	(18) 2,456	(8) 3,063	(539) 2,283
Atmospheric, Earth, Marine & Space Sciences		(7) 2,043	(10) 2,490	(15) 2,407	(9) 2,700	(4) 2,750	(5) 2,980	(5) 3,420	(1) 3,800	(176) 2,759
Chemistry	(1) 1,200	(9) 2,044	(46) 2,265	(36) 2,386	(30) 2,627	(25) 2,768	(22) 3,050	(26) 3,388	(35) 3,349	(16) 2,864
Computer Sciences	(14) 2,400	(49) 2,539	(48) 2,744	(44) 3,011	(38) 3,126	(34) 3,421	(43) 3,749	(35) 3,549	(16) 3,856	(887) 3,171
Mathematics & Statistics	(1) 2,000	(8) 2,125	(11) 2,536	(21) 2,824	(17) 2,871	(14) 3,036	(28) 3,639	(20) 3,665	(10) 3,950	(389) 3,252
Physics	(2) 1,900	(10) 2,270	(9) 2,500	(19) 2,958	(23) 3,061	(16) 3,163	(41) 3,724	(41) 3,878	(26) 3,965	(583) 3,404
Economics	(2) 1,800	(6) 1,733	(6) 2,100	(7) 2,871	(13) 2,992	(9) 3,100	(5) 3,420	(5) 3,380	(6) 3,750	(143) 2,927

*Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984

TABLE 48

NUMBER AND MEAN MONTHLY SALARIES OF DOCTORATE DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1984

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	5	7	10	13	15	18-19	22-23	26-27	30-31	Total*
Aeronautical & Astronautical Engineering	(1) $3,200	(3) 2,867	(8) $3,413	(20) $3,515	(12) $3,600	(36) $3,897	(35) $4,303	(23) $4,130	(18) $4,067	(400) $4,002
Chemical Engineering	(7) 3,114	(16) 3,138	(22) 3,423	(20) 3,780	(19) 3,863	(28) 4,029	(28) 4,400	(22) 4,627	(10) 4,940	(407) 3,963
Electrical & Electronic Engineering	(6) 3,350	(26) 3,323	(62) 3,582	(58) 3,975	(86) 3,833	(205) 4,168	(143) 4,294	(81) 4,383	(53) 4,426	(1,724) 4,097
Materials Engineering	(3) 2,433	(3) 2,533	(10) 3,140	(16) 3,525	(10) 3,310	(19) 3,868	(12) 4,017	(17) 3,988	(10) 4,020	(276) 3,654
Mechanical Engineering	(1) 2,700	(10) 2,850	(16) 3,281	(16) 3,444	(14) 3,514	(46) 3,800	(44) 4,125	(25) 4,448	(18) 4,450	(439) 3,858
Metallurgical Engineering	(2) 1,600	(1) 3,600	(7) 2,886	(5) 3,040	(5) 3,180	(4) 4,300	(10) 3,730	(5) 4,020	(9) 4,267	(159) 3,650
Nuclear & Reactor Engineering		(1) 2,800	(11) 3,300	(6) 3,417	(20) 3,685	(43) 3,958	(28) 4,046	(24) 4,113	(14) 4,107	(386) 3,861
Total Engineering	(20) 2,915	(65) 3,074	(150) 3,375	(163) 3,601	(177) 3,703	(428) 4,029	(329) 4,205	(206) 4,321	(146) 4,327	(4,177) 3,946
Agricultural & Biological Sciences	(3) 1,733	(24) 1,842	(72) 2,482	(69) 2,441	(64) 2,820	(102) 3,243	(80) 3,331	(56) 3,618	(56) 3,616	(1,365) 3,016
Atmospheric, Earth, Marine & Space Sciences		(4) 1,925	(14) 2,593	(17) 3,024	(16) 3,119	(25) 3,388	(19) 3,579	(9) 3,722	(8) 4,088	(277) 3,313
Chemistry	(10) 2,590	(42) 2,543	(85) 2,865	(66) 3,141	(55) 3,322	(109) 3,615	(75) 3,636	(62) 4,160	(52) 4,387	(1,465) 3,528
Computer Sciences	(1) 3,200	(4) 3,000	(7) 3,386	(16) 3,725	(10) 3,980	(31) 4,035	(17) 3,653	(5) 3,760	(1) 4,000	(218) 3,828
Mathematics & Statistics	(1) 2,500	(14) 2,750	(19) 2,989	(14) 3,271	(27) 3,470	(48) 3,710	(30) 4,023	(20) 4,135	(15) 4,207	(439) 3,638
Physics	(5) 2,740	(19) 2,663	(44) 3,114	(53) 3,211	(56) 3,405	(133) 3,656	(100) 3,944	(70) 4,063	(68) 4,459	(1,396) 3,739
Economics		(5) 2,680	(6) 3,117	(4) 3,300	(10) 3,220	(16) 3,544	(13) 3,262	(8) 3,888	(8) 3,788	(166) 3,489
Psychology		(4) 2,450	(4) 2,150	(6) 2,850	(6) 2,850	(8) 3,525	(4) 3,525	(7) 3,400	(11) 3,936	(146) 3,362

*Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984.

TABLE 49

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY DEGREE LEVEL, TYPE OF ESTABLISHMENT, AND SELECTED YEARS SINCE FIRST DEGREE, 1984

TYPE OF ESTABLISHMENT & DEGREE LEVEL	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
BACHELOR'S DEGREE										
Nonprofit Research Institutions	(183) $1,971	(121) $2,055	(112) $2,254	(74) $2,299	(53) $2,802	(45) $2,838	(68) $3,068	(69) $3,465	(38) $3,311	(2,088) $2,534
Educational Institutions	(90) 1,362	(104) 1,453	(47) 1,709	(27) 1,956	(23) 2,283	(19) 2,411	(28) 2,561	(28) 2,982	(12) 2,825	(1,055) 1,828
Contract Research Centers	(213) 2,324	(201) 2,518	(130) 2,775	(120) 3,017	(88) 3,189	(88) 3,459	(127) 3,633	(210) 3,785	(144) 3,985	(4,042) 3,282
Federal Establishments	(130) 2,061	(155) 2,326	(60) 2,567	(86) 2,865	(71) 3,044	(64) 3,108	(191) 3,528	(298) 3,822	(118) 3,827	(3,353) 3,217
Total Industry	(2,965) 2,378	(2,580) 2,586	(1,241) 2,819	(778) 3,034	(522) 3,135	(560) 3,375	(789) 3,615	(1,050) 3,753	(610) 3,784	(30,609) 2,979
MASTER'S DEGREE										
Nonprofit Research Institutions	(11) 2,227	(46) 2,280	(60) 2,457	(64) 2,730	(69) 2,929	(39) 3,172	(70) 3,519	(61) 3,641	(35) 3,380	(1,415) 3,086
Educational Institutions	(6) 1,817	(41) 1,683	(66) 1,676	(49) 1,898	(43) 2,228	(26) 2,173	(29) 2,745	(30) 2,747	(19) 3,105	(918) 2,173
Contract Research Centers	(28) 2,493	(89) 2,664	(148) 2,855	(150) 3,021	(134) 3,314	(115) 3,467	(184) 3,815	(203) 4,008	(145) 4,127	(3,791) 3,563
Federal Establishments	(9) 2,100	(17) 2,206	(28) 2,532	(33) 2,697	(41) 3,020	(41) 3,105	(101) 3,643	(83) 3,959	(41) 4,005	(1,197) 3,369
Total Industry	(39) 2,606	(376) 2,694	(535) 2,916	(492) 3,150	(403) 3,295	(372) 3,586	(584) 3,851	(532) 3,992	(310) 4,021	(11,120) 3,464
DOCTORAL DEGREE										
Nonprofit Research Institutions	(1) 2,000	(1) 2,300	(26) 2,531	(52) 2,921	(54) 3,137	(56) 3,391	(77) 3,713	(60) 3,983	(27) 3,989	(1,054) 3,495
Educational Institutions	(3) 1,367	(5) 1,860	(68) 2,004	(111) 2,255	(108) 2,492	(117) 2,719	(194) 3,155	(116) 3,354	(111) 3,687	(2,543) 2,957
Contract Research Centers		(5) 3,020	(42) 3,243	(109) 3,367	(118) 3,482	(141) 3,601	(315) 4,024	(188) 4,206	(120) 4,330	(3,313) 3,915
Federal Establishments			(7) 2,814	(15) 2,873	(31) 3,129	(34) 3,106	(95) 3,686	(87) 4,002	(42) 4,295	(786) 3,703
Total Industry		(7) 2,871	(78) 3,112	(185) 3,352	(188) 3,601	(183) 3,783	(355) 4,170	(248) 4,284	(141) 4,506	(4,180) 3,962

*Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

 SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984.

TABLE 50

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY HIGHEST DEGREE FIELD AND SELECTED YEARS SINCE DEGREE, 1984

HIGHEST DEGREE FIELD	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
BACHELOR'S DEGREE										
Engineering	(2,809) $2,379	(2,417) $2,600	(1,062) $2,886	(682) $3,097	(463) $3,219	(521) $3,414	(765) $3,683	(1,212) $3,825	(618) $3,868	(29,406) $3,052
Chemistry	(123) 1,772	(140) 2,002	(104) 2,278	(63) 2,508	(51) 2,649	(55) 2,802	(77) 2,905	(71) 3,225	(73) 3,507	(2,290) 2,606
Physics	(85) 2,181	(90) 2,378	(49) 2,641	(43) 2,928	(37) 3,035	(44) 3,355	(107) 3,612	(136) 3,771	(66) 3,848	(1,879) 3,238
Other Physical Sciences	(35) 2,149	(42) 2,157	(28) 2,639	(19) 2,795	(20) 3,025	(12) 3,100	(24) 3,442	(35) 3,640	(21) 3,843	(666) 2,954
Life Sciences	(69) 1,422	(76) 1,692	(76) 1,999	(54) 2,241	(39) 2,444	(17) 2,312	(35) 2,674	(19) 3,058	(19) 2,779	(1,103) 2,159
Social Sciences	(31) 1,623	(17) 1,971	(25) 2,352	(13) 2,492	(8) 2,488	(11) 2,800	(6) 2,850	(11) 3,764	(8) 3,988	(379) 2,535
Mathematics & Statistics	(243) 2,222	(209) 2,459	(109) 2,636	(93) 2,854	(71) 3,082	(56) 3,291	(106) 3,460	(91) 3,605	(52) 3,638	(2,740) 2,897
MASTER'S DEGREE										
Engineering	(112) 2,541	(401) 2,686	(503) 2,944	(454) 3,176	(405) 3,352	(345) 3,651	(613) 3,888	(557) 4,106	(326) 4,115	(11,314) 3,521
Chemistry	(6) 2,300	(13) 2,408	(46) 2,363	(33) 2,445	(35) 2,829	(28) 2,746	(31) 3,161	(32) 3,459	(39) 3,477	(862) 2,985
Physics	(1) 2,700	(12) 2,242	(35) 2,617	(45) 2,956	(36) 3,208	(38) 3,334	(90) 3,731	(85) 3,788	(48) 3,971	(1,200) 3,474
Other Physical Sciences	(1) 2,100	(7) 2,086	(26) 2,562	(38) 2,845	(23) 2,948	(14) 3,207	(13) 3,315	(20) 3,810	(14) 3,743	(465) 3,124
Life Sciences	(3) 1,833	(25) 1,828	(51) 2,000	(51) 2,345	(41) 2,354	(26) 2,685	(20) 3,150	(26) 2,727	(13) 3,023	(834) 2,512
Social Sciences	(5) 2,140	(12) 1,850	(16) 2,181	(12) 2,808	(19) 3,158	(12) 3,100	(9) 3,544	(12) 3,233	(11) 3,791	(297) 2,900
Mathematics & Statistics	(8) 2,288	(29) 2,428	(45) 2,727	(61) 2,897	(47) 3,072	(39) 3,300	(80) 3,545	(62) 3,682	(40) 3,983	(1,228) 3,365
DOCTORAL DEGREE										
Engineering	(1) 2,000	(9) 2,956	(60) 3,262	(130) 3,450	(138) 3,642	(154) 3,776	(346) 4,166	(258) 4,242	(113) 4,422	(3,560) 3,998
Chemistry	(1) 1,200	(1) 2,800	(49) 2,537	(93) 2,844	(72) 3,167	(70) 3,289	(125) 3,694	(77) 4,017	(78) 4,444	(1,868) 3,596
Physics			(24) 2,804	(68) 3,309	(80) 3,419	(86) 3,485	(207) 3,959	(144) 4,163	(95) 4,340	(2,138) 3,838
Other Physical Sciences		(1) 2,300	(13) 2,554	(24) 2,725	(38) 3,382	(34) 3,429	(67) 3,785	(47) 4,174	(28) 4,393	(714) 3,670
Life Sciences	(2) 1,450	(4) 1,950	(29) 2,197	(83) 2,608	(84) 2,562	(73) 2,973	(117) 3,355	(78) 3,469	(62) 3,623	(1,563) 3,119
Social Sciences			(8) 2,550	(13) 2,562	(14) 2,291	(23) 3,030	(38) 3,492	(12) 4,108	(20) 4,000	(444) 3,387
Mathematics & Statistics		(2) 2,650	(13) 2,685	(21) 3,086	(21) 3,367	(38) 3,489	(50) 3,772	(36) 3,922	(15) 4,100	(595) 3,625

*Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984.

TABLE 51

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY PROFESSIONALS BY WORKING-AS-OCCUPATION, DEGREE LEVEL, SEX AND SELECTED YEARS SINCE DEGREE, 1984

WORKING-AS-OCCUPATION, DEGREE, LEVEL & SEX	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
BIOLOGICAL AND BIOMEDICAL SCI.										
Bachelor's Degree										
	(10)	(16)	(13)	(23)	(16)	(4)	(9)	(6)	(5)	(266)
Men	$1,330	$1,563	$1,646	$2,222	$2,294	$2,975	$2,889	$3,017	$2,760	$2,157
	(24)	(22)	(27)	(14)	(4)	(4)	(15)	(5)	(7)	(394)
Women	1,338	1,541	1,830	1,993	2,225	1,975	2,087	2,180	2,300	1,803
Master's Degree										
	(1)	(7)	(17)	(16)	(15)	(10)	(8)	(5)	(1)	(243)
Men	1,200	1,586	1,976	2,369	2,267	2,360	3,600	2,680	3,600	2,500
		(4)	(10)	(6)	(6)	(4)	(8)	(5)	(2)	(132)
Women		2,150	2,000	2,283	2,150	2,425	2,350	2,560	2,200	2,161
Doctoral Degree										
	(3)	(2)	(14)	(45)	(45)	(36)	(70)	(36)	(29)	(849)
Men	1,367	1,700	1,864	2,413	2,440	2,867	3,397	3,500	3,728	3,075
		(1)	(5)	(6)	(9)	(7)	(8)	(2)	(3)	(121)
Women		2,200	1,760	2,283	2,344	2,900	2,788	2,350	2,633	2,429
CHEMISTRY										
Bachelor's Degree										
	(57)	(67)	(55)	(42)	(35)	(31)	(46)	(41)	(38)	(1,274)
Men	1,553	1,887	2,222	2,386	2,560	2,697	2,815	3,288	3,492	2,582
	(34)	(44)	(33)	(11)	(18)	(9)	(13)	(9)	(6)	(461)
Women	1,703	1,884	2,006	2,218	2,550	2,278	2,338	2,578	2,517	2,064
Master's Degree										
	(1)	(4)	(34)	(27)	(21)	(19)	(17)	(24)	(30)	(593)
Men	1,200	2,075	2,285	2,463	2,829	2,842	3,165	3,492	3,447	2,976
		(5)	(12)	(9)	(9)	(6)	(5)	(2)	(5)	(142)
Women		2,020	2,208	2,156	2,156	2,533	2,780	2,150	2,760	2,397
Doctoral Degree										
		(2)	(35)	(72)	(57)	(51)	(96)	(55)	(50)	1,322
Men		2,500	2,506	2,839	3,188	3,376	3,731	4,038	4,368	3,581
			(7)	(13)	(9)	(4)	(4)	(5)	(2)	(143)
Women			2,729	3,008	2,844	2,625	3,100	3,060	4,850	3,032
ENGINEERING										
Bachelor's Degree										
	(2,490)	(2,230)	(1,062)	(740)	(500)	(543)	(863)	(1,284)	(697)	(29,276)
Men	2,366	2,589	2,868	3,094	3,205	3,434	3,675	3,825	3,866	3,094
	(487)	(355)	(144)	(56)	(38)	(27)	(30)	(25)	(10)	(2,855)
Women	2,329	2,523	2,701	2,732	2,842	3,211	3,263	3,032	3,240	2,561
Master's Degree										
	(103)	(344)	(500)	(475)	(416)	(389)	(684)	(635)	(389)	(12,159)
Men	2,572	2,695	2,944	3,145	3,352	3,644	3,867	4,049	4,086	3,548
	(11)	(67)	(66)	(60)	(37)	(23)	(25)	(14)	(8)	(837)
Women	2,264	2,567	2,820	3,183	3,165	3,109	3,280	3,250	3,588	2,969
Doctoral Degree										
	(1)	(11)	(95)	(192)	(224)	(253)	(524)	(379)	(199)	(5,700)
Men	2,000	2,827	3,061	3,371	3,578	3,655	4,131	4,234	4,348	3,947
			(7)	(22)	(16)	(12)	(15)	(7)	(2)	(238)
Women			3,114	3,009	3,238	3,367	3,487	3,971	3,800	3,383
MATH & STATISTICS										
Bachelor's Degree										
	(17)	(9)	(14)	(12)	(9)	(13)	(23)	(23)	(13)	(378)
Men	2,029	2,344	2,429	2,950	3,067	3,292	3,609	3,757	3,754	3,162
	(8)	(8)	(6)	(7)	(4)	(4)	(9)	(3)	(2)	(154)
Women	2,263	2,075	2,250	2,529	2,525	3,150	2,733	2,700	2,250	2,569
Master's Degree										
		(7)	(10)	(17)	(12)	(9)	(27)	(18)	(10)	(315)
Men		2,129	2,580	2,906	2,867	3,222	3,641	3,833	3,950	3,387
	(1)	(1)	(1)	(4)	(5)	(5)	(1)	(2)		(74)
Women	2,020	2,100	2,100	2,475	2,880	2,700	3,600	2,150		2,677
PHYSICS										
Bachelor's Degree										
	(21)	(35)	(22)	(14)	(12)	(15)	(42)	(56)	(26)	(763)
Men	2,133	2,151	2,641	2,757	3,167	3,173	3,714	3,770	3,977	3,194
	(5)	(5)	(1)	(1)		(1)			(1)	(52)
Women	2,260	2,540	1,300	2,500		3,000			3,200	2,658

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1984 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, June 1984

TABLE 52

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY BACHELOR'S LEVEL SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND DEGREE OR NON-DEGREE IN WORKING-AS-OCCUPATION, 1984

WORKING-AS-OCCUPATION	DEGREE IN WORKING-AS-OCCUPATION		NON-DEGREE IN WORKING-AS-OCCUPATION	
	Number	Salary	Number	Salary
Physics	565	$3,107	238	$3,278
Chemistry	1,416	2,432	319	2,500
Engineering	26,792	3,059	5,304	2,978
Mathematics or Statistics	432	2,933	99	3,230
Biological Sciences	363	1,923	137	2,178

TABLE 53

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY PROFESSIONALS BY TYPE OF DEGREE AND SELECTED YEARS SINCE DEGREE, 1984

DEGREE	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Doctor of Veterinary Med.	(3) $1,533	(3) $1,667	(2) $2,150	(5) $3,020	(4) $3,700	(2) $3,900	(9) $3,956	(11) $4,200	(1) $4,900	(113) $3,444
Doctor Dental Surgery	(1) 1,400	(1) 1,800	(5) 2,220	(1) 2,600	(4) 3,350	(2) 3,300	(3) 3,467	(1) 2,400	(2) 3,750	(50) 2,874
Medical Doctor	(1) 1,300	(5) 2,340	(7) 2,343	(7) 2,443	(5) 3,640	(10) 2,810	(5) 3,680	(6) 4,033		(183) 2,999

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Research and Development Magazine, March 1985 and May 1985.

TABLE 54

SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY PROFESSION, 1984 AND 1985

PROFESSION	MEDIAN SALARY		% Increase
	1985	1984	
Mathematician	$51,200	$44,750	14.4
Aeronautical Engineer	49,330	43,550	13.3
Metallurgist	44,580	41,310	7.9
Ceramist	43,450	39,200	10.0
Physicist	43,120	40,770	5.8
Electrical Engineer	42,910	39,240	9.4
Chemical Engineer	42,390	40,140	5.6
Mechanical Engineer	42,180	40,010	5.4
Geologist	41,830	40,950	2.1
Chemist	39,040	36,510	6.9
Industrial Engineers	38,280	36,280	5.5
Other Professionals	35,190	33,480	5.1
Biologist	34,950	33,660	3.8

TABLE 55

SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY DEGREE LEVEL, 1984 AND 1985

DEGREE	MEDIAN SALARY		% Increase	ANNUAL DIFFERENCE		Difference Increase %*
	1985	1984		1985	1984	
Doctorate	$45,720	$43,200	5.8	$6,200	$5,280	+17.4
Master's	39,520	37,920	4.2	3,180	3,210	- 0.9
Bachelor's	36,340	34,710	4.7	4,870	3,760	+29.5
Less than Bachelors	31,470	30,950	1.7			

* Difference above next-lower degree.

TABLE 56

MEDIAN ANNUAL SALARIES OF SCIENTISTS & ENGINEERS EMPLOYED IN RESEARCH & DEVELOPMENT BY TYPE OF EMPLOYER & SEX, 1984 & 1985

TYPE OF EMPLOYER	1985		1984		% GAIN		TOTAL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	1985	1984
Industry	$41,750	$31,590	$39,200	$29,590	6.5	6.8	$39,790	$38,210
Government	40,400	33,130	38,630	29,450	4.6	12.5	40,980	38,550
Universities	36,040	24,040	32,580	20,450	10.6	17.6	34,950	31,890
Overall	40,990	31,130	38,440	28,990	6.6	7.4		

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1985.

TABLE 57

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL & CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1985

OCCUPATION AND CLASS	NUMBER OF OF EMPLOYEES*	AVERAGE ANNUAL SALARIES
Accountants I	12,465	$20,577
Accountants II	22,874	25,349
Accountants III	36,599	30,037
Accountants IV	21,232	37,607
Accountants V	7,841	46,879
Chief Accountants II	1,127	46,517
Chief Accountants III	648	60,466
Chemists I	3,096	22,631
Chemists II	5,768	26,722
Chemists III	9,609	32,461
Chemists IV	10,101	39,418
Chemists V	8,843	47,706
Chemists VI	4,174	58,210
Chemists VII	1,093	68,710
Engineers I	31,121	27,405
Engineers II	59,275	30,275
Engineers III	135,494	34,348
Engineers IV	148,785	40,991
Engineers V	106,966	48,366
Engineers VI	54,701	56,136
Engineers VII	13,958	65,641
Engineers VIII	2,490	76,205
Engineering Technicians I	5,239	16,876
Engineering Technicians II	18,697	19,339
Engineering Technicians III	33,464	23,179
Engineering Technicians IV	37,435	27,259
Engineering Technicians V	19,717	31,386
Attorneys I	1,184	29,886
Attorneys II	3,046	37,256
Attorneys III	4,556	47,742
Attorneys IV	3,466	59,087
Clerk, Accounting II	76,029	14,728
Clerk, Accounting III	50,107	17,327
Secretaries II	61,039	19,988
Secretaries III	111,029	22,520
Drafters I	2,135	13,208
Drafters II	8,190	16,488
Drafters III	19,336	20,006
Drafters IV	20,949	23,950
Drafters V	15,763	29,876
Computer Operators I	9,305	13,670
Computer Operators II	32,988	16,973
Computer Operators III	23,039	20,664
Computer Operators IV	8,573	24,016
Computer Operators V	1,416	28,440
Computer Programmers I	14,201	20,318
Computer Programmers II	34,235	23,690
Computer Programmers III	44,128	28,367
Computer Programmers IV	19,279	33,708
Computer Programmers V	8,517	41,288
Systems Analysts I	20,649	28,197
Systems Analysts II	42,666	33,465
Systems Analysts III	34,202	39,663
Systems Analysts IV	12,785	46,729
Systems Analysts V	2,688	56,461
Systems Analysts VI	179	68,809

*Occupational Employment estimates relate to the total in all establishments within scope of the survey and not the number actually surveyed.

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1984.

TABLE 58

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1984

OCCUPATION AND CLASS	NO. OF EMPLOYEES	MONTHLY SALARIES		ANNUAL SALARIES	
		MEAN	MEDIAN	MEAN	MEDIAN
Accountants I	13,183	$1,654	$1,640	$19,843	$19,680
Accountants II	23,559	2,027	1,999	24,325	23,990
Accountants III	38,763	2,393	2,360	28,721	28,320
Accountants IV	22,717	2,976	2,933	35,715	35,196
Accountants V	8,114	3,706	3,695	44,466	44,340
Chief Accountants II	1,383	3,677	3,640	44,128	43,683
Chief Accountants III	899	4,735	4,753	56,816	57,036
Chemists I	2,395	1,801	1,780	21,609	21,360
Chemists II	5,891	2,123	2,114	25,481	25,370
Chemists III	9,771	2,537	2,476	30,441	29,712
Chemists IV	9,996	3,137	3,100	37,643	37,200
Chemists V	7,815	3,801	3,791	45,614	45,492
Chemists VI	3,290	4,514	4,511	54,163	54,132
Chemists VII	1,122	5,256	5,331	63,072	63,974
Engineers I	27,872	2,180	2,188	26,163	26,259
Engineers II	67,872	2,408	2,396	28,899	28,754
Engineers III	135,792	2,730	2,707	32,761	32,481
Engineers IV	145,728	3,250	3,239	39,005	38,868
Engineers V	100,411	3,862	3,832	46,349	45,982
Engineers VI	49,013	4,479	4,420	53,749	53,040
Engineers VII	13,435	5,097	5,041	61,166	60,492
Engineers VIII	2,590	5,899	5,815	70,788	69,780
Engineering Technicians I	4,626	1,347	1,333	16,169	15,994
Engineering Technicians II	19,229	1,561	1,535	18,733	18,420
Engineering Technicians III	31,920	1,863	1,827	22,351	21,924
Engineering Technicians IV	39,016	2,197	2,172	26,362	26,070
Engineering Technicians V	22,702	2,507	2,491	30,084	29,888
Attorneys I	1,186	2,410	2,332	28,918	27,989
Attorneys II	2,965	2,937	2,916	35,238	34,987
Attorneys III	3,983	3,729	3,666	44,743	43,992
Attorneys IV	3,340	4,662	4,567	55,462	54,804
Clerk, Accounting II	79,368	1,172	1,127	14,060	13,519
Clerk, Accounting III	58,863	1,377	1,324	16,527	15,888
Secretaries II	55,132	1,410	1,370	16,920	16,440
Secretaries III	114,459	1,588	1,544	19,053	18,523
Drafters I	1,961	1,050	1,040	12,596	12,479
Drafters II	10,126	1,343	1,300	16,120	15,599
Drafters III	19,886	1,591	1,550	19,098	18,600
Drafters IV	22,584	1,922	1,902	23,067	22,824
Drafters V	17,358	2,421	2,378	29,057	28,540
Computer Operators I	8,955	1,089	1,061	13,068	12,729
Computer Operators II	30,855	1,361	1,317	16,337	15,804
Computer Operators III	24,370	1,645	1,583	19,743	18,998
Computer Operators IV	8,816	1,926	1,889	23,107	22,670
Computer Operators V	1,479	2,269	2,255	27,223	27,060
Programmers/Programmer Analysts I	13,339	1,650	1,605	19,801	19,260
Programmers/Programmer Analysts II	33,626	1,901	1,895	22,815	22,740
Programmers/Programmer Analysts III	42,777	2,263	2,249	27,158	26,989
Programmers/Programmer Analysts IV	16,546	2,661	2,666	31,929	31,987
Programmers/Programmer Analysts V	7,296	3,239	3,270	38,868	39,240
Systems Analysts I	16,127	2,257	2,246	27,084	26,952
Systems Analysts II	34,702	2,694	2,674	32,324	32,087
Systems Analysts III	28,321	3,171	3,149	38,057	37,786
Systems Analysts IV	10,375	3,729	3,690	44,748	44,282
Systems Analysts V	2,140	4,493	4,458	53,917	53,496

SOURCE: Chemical and Engineering News, Vol. 63, Number 27, July 8, 1985, p. 32; American Chemical Society, Salaries 1984, and Salaries 1985 - An Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, June 1984 and October 1985.

TABLE 59

MEDIAN ANNUAL SALARIES FOR CHEMISTS* AND CHEMICAL ENGINEERS* OF ALL EXPERIENCE LEVELS BY DEGREE, 1973 - 1985

YEAR	CHEMISTS			CHEMICAL ENGINEERS		
	B.S.	M.S.	Ph.D.	B.S.	M.S.	Ph.D.
1973	$16,800	$17,500	$20,500	$20,200	$22,000	$23,100
1974	17,500	18,400	21,700	21,300	22,400	24,800
1975	19,000	19,800	23,000	24,000	25,000	26,000
1976	19,800	20,500	24,700	26,000	27,000	29,000
1977	21,000	22,000	26,000	28,000	30,000	30,000
1978	22,000	24,000	27,400	30,000	32,000	32,000
1979	23,500	25,000	29,000	31,700	31,500	35,000
1980	25,000	26,000	31,200	35,000	35,000	38,000
1981	27,500	30,000	35,000	36,000	40,000	42,000
1982	28,500	31,600	37,500	40,000	42,000	45,000
1983	30,000	33,000	40,000	40,000	41,900	48,500
1984	30,900	34,000	42,000	39,995	46,000	54,700
1985	32,000	36,000	44,000	38,200	41,050	55,900

* Includes only members of the American Chemical Society.

CHART 2

TRENDS IN MEDIAN ANNUAL SALARIES OF CHEMISTS IN CURRENT DOLLARS, BY DEGREE LEVEL, 1975-1985

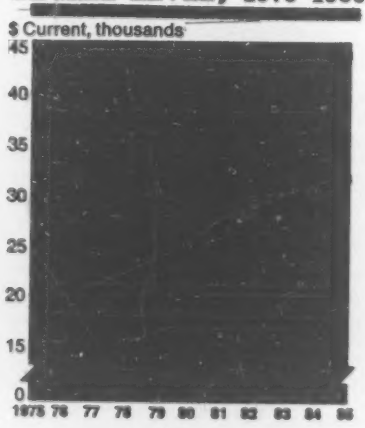
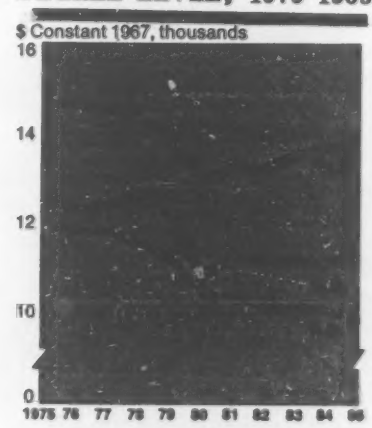


CHART 3

TRENDS IN MEDIAN ANNUAL SALARIES OF CHEMISTS IN CONSTANT 1967 DOLLARS, BY DEGREE LEVEL, 1975-1985



SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 60

1985 MEDIAN SALARY OF FULL-TIME EMPLOYED NON-ACADEMIC CHEMISTS* COMPARED WITH INDUSTRIAL CHEMISTS* BY DEGREE LEVEL AND YEARS SINCE B.S.

YEARS SINCE B.S.	BACHELOR'S		MASTER'S		Ph. D.	
	All Non-Acad.	Indus.	All Non-Acad.	Indus.	All Non-Acad.	Indus.
0-1	$21,000	$21,450	$	$	$	$
2-4	23,000	23,600	26,100	26,700	36,000	36,000
5-9	28,000	28,500	30,000	30,150	38,000	38,000
10-14	33,000	33,300	34,500	35,000	42,000	42,000
15-19	36,900	37,600	38,950	39,200	47,500	48,000
20-24	40,000	40,000	42,000	43,000	52,000	54,000
25-29	43,000	43,150	45,000	46,000	54,850	56,000
30-34	44,000	44,500	47,000	48,000	57,000	59,000
35-39	43,750	44,000	48,000	48,500	57,500	58,000
> = 40	46,000	46,000	49,000	50,000	60,750	62,000
Overall	32,500	33,000	38,000	38,000	48,000	48,600

* Includes only members of the American Chemical Society.

TABLE 61

MEDIAN SALARIES OF FULL-TIME EMPLOYER INDUSTRIAL CHEMISTS* BY HIGHEST DEGREE, SEX AND YEARS SINCE B.S., 1985

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		Ph. D.	
	Men	Women	Men	Women	Men	Women
0-1	$21,600	$21,000	$ **	$	$	$
2-4	24,000	23,400	26,350	26,950	36,000	**
5-9	29,000	27,300	30,700	29,900	38,000	37,400
10-14	34,000	30,000	35,000	33,000	42,000	40,500
15-19	38,400	34,000	40,000	36,000	49,000	44,800
20-24	41,000	34,000	44,850	38,000	54,000	48,000
25-29	44,000	36,000	48,000	40,000	56,000	45,700
30-34	45,000	37,500	48,000	44,300	59,000	50,000
35-39	45,000	36,800	49,000	41,000	58,000	54,000
> = 40	47,000	43,800	50,000	36,500	62,700	48,750
All Years	35,500	26,600	40,000	32,200	49,800	40,000

* Includes only members of the American Chemical Society.

** Less than 5 respondents.

SOURCE: Chemical and Engineering News, Vol. 63, Number 27, July 8, 1985, p. 32; American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 62

MEDIAN SALARIES OF FULL-TIME EMPLOYED NON-ACADEMIC CHEMISTS* BY DEGREE LEVEL, SEX, AND YEARS SINCE B.S., 1985

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		Ph. D.	
	Men	Women	Men	Women	Men	Women
0-1	$21,000	$21,000	$	$	$	$
2-4	23,400	23,000	26,200	26,000	37,200	
5-9	28,500	27,000	30,200	29,000	38,000	37,300
10-14	33,450	30,000	34,800	33,000	42,000	40,000
15-19	37,000	33,000	39,600	35,000	48,000	43,000
20-24	41,000	35,000	44,000	36,650	52,200	44,900
25-29	43,950	36,000	45,700	40,000	55,000	44,000
30-34	45,000	34,200	47,400	40,000	57,550	50,000
35-39	45,000	36,000	48,500	41,000	57,600	54,000
> = 40	47,350	41,000	49,700	33,750	60,300	48,250
ALL YEARS	**35,000**	**26,500**	**39,000**	**32,000**	**49,000**	**40,000**

* Includes only members of the American Chemical Society.

TABLE 63

MEDIAN ANNUAL SALARIES OF CHEMISTS* BY TYPE OF EMPLOYER, DEGREE LEVEL AND SEX, 1985

TYPE OF EMPLOYER	DEGREE LEVEL AND SEX								
	BACHELOR'S			MASTER'S			Ph. D.'s		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Private Industry	$36,400	$31,800	$35,700	$41,500	$37,000	$40,800	$52,100	$46,200	$51,800
Government	36,200	32,700	35,700	41,500	36,500	40,900	50,800	43,600	50,500
Academic				30,900	26,100	30,000	40,500	32,300	39,600
Other Non-Academic	32,700	28,800	31,900	37,000	31,800	35,900	46,300	41,400	45,800

* Includes only members of the American Chemical Society

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985.

TABLE 64

MEDIAN ANNUAL SALARIES OF CHEMISTS* EMPLOYED FULL-TIME IN PRIVATE INDUSTRY BY WORK FUNCTION, DEGREE LEVEL AND SEX, 1985

DEGREE LEVEL AND SEX	WORK FUNCTION										
	General Management	Management-R&D	Basic Research	Applied Research	Marketing	Forensic	Prod. & Quality Control	Writing/ Editing	Data Processing	Consulting	Other
BACHELOR'S											
Men	$42,000	$46,000	$30,000	$33,800	$40,000	$29,700	$32,000	$35,000	$35,000	$35,800	$37,100
Women	34,000	38,000	25,400	26,700	29,000	24,750	25,000	34,300	29,150	22,000	30,000
Total	41,000	45,000	27,000	31,900	39,200	27,900	30,000	34,750	33,500	34,000	34,750
MASTER'S											
Men	49,000	50,000	34,500	38,000	41,000	34,100	36,000	40,700	46,000	39,000	38,700
Women	36,000	41,000	31,400	31,500	34,700	29,600	31,100	36,000	34,750	32,000	36,000
Total	48,000	50,000	33,750	36,000	40,000	32,900	35,000	39,150	40,000	38,750	38,000
Ph. D.											
Men	58,700	59,800	45,000	45,600	50,900	44,000	44,350	48,000	38,000	46,750	53,250
Women	42,000	50,000	40,500	39,450	43,000	40,900	37,300	38,000	**	47,000	45,800
Total	57,950	59,000	44,600	45,000	50,000	42,000	44,000	48,000	38,000	46,750	52,250

* Includes only members of the American Chemical Society.

** No respondents.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 65

1985 MEDIAN ANNUAL SALARIES OF CHEMISTS* EMPLOYED FULL-TIME IN PRIVATE INDUSTRY BY DEGREE LEVEL, WORK SPECIALTY AND SEX

DEGREE AND SEX	WORK SPECIALITY											
	Analytical	Agricultural/ Food	Biochemistry	Environmental	Organic	Inorganic	Pharmaceutical	Physical	Polymer	Other Chemistry	General Chemistry	Medicinal/ Clinical
BACHELOR'S												
Men	$33,000	$36,900	$30,500	$34,750	$36,000	$38,000	$34,100	$36,000	$39,000	$37,000	$36,600	$33,100
Women	26,400	26,400	25,000	27,000	26,900	28,000	25,250	31,500	26,650	26,000	27,400	27,000
Total	31,500	33,150	29,000	32,200	34,000	36,000	30,750	35,750	37,000	34,600	35,000	30,150
MASTER'S												
Men	37,000	40,000	35,000	39,000	40,000	41,000	36,000	41,600	42,000	42,150	41,000	38,000
Women	32,000	34,100	31,550	32,000	31,450	33,500	34,750	32,000	34,000	34,000	30,500	34,250
Total	36,000	38,800	34,000	38,000	39,000	40,000	36,000	39,700	41,000	40,000	40,000	37,000
Ph. D.												
Men	45,550	50,000	47,100	50,000	48,100	48,000	49,250	50,000	51,000	50,000	54,000	52,500
Women	39,500	38,900	40,500	43,500	40,100	38,900	41,500	43,800	40,000	40,000	44,300	45,200
Total	45,000	49,000	46,000	49,900	48,000	47,000	48,000	50,000	50,000	50,000	53,000	51,500

*Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 66

MEDIAN AND MEAN SALARIES OF EMPLOYED FULL-TIME CHEMISTS* IN PRIVATE INDUSTRY BY TYPE OF INDUSTRY AND DEGREE LEVEL, 1985

TYPE OF INDUSTRY	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
Chemicals	$36,000	$38,258	$41,000	$43,417	$50,000	$51,792
Agricultural Chemicals	31,950	34,770	36,000	37,685	45,400	49,092
Coatings	33,850	35,665	37,600	39,069	46,900	48,683
Foods	32,000	34,338	38,000	40,983	47,500	49,752
Metals/Minerals	33,500	35,002	38,000	39,887	48,250	48,368
Paper	33,450	36,216	41,000	39,877	47,000	48,276
Petroleum	36,650	40,750	41,550	45,302	56,500	58,366
Pharmaceuticals, Personal Care	30,000	32,457	35,500	37,663	48,000	50,712
Rubber	39,400	40,087	39,000	41,142	50,000	50,432
Biochemical Products	27,150	28,114	35,000	37,477	44,000	48,466
Electronics	33,000	35,348	39,000	40,395	48,000	49,063
Other Mfg.	33,500	35,352	39,000	40,443	48,000	48,606
Non-Manufacturing	29,700	31,045	35,000	36,448	45,000	46,001
ALL INDUSTRY	**33,000**	**35,435**	**38,400**	**40,391**	**49,000**	**50,704**

* Includes only members of the American Chemical Society.

TABLE 67

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS* IN PRIVATE INDUSTRY BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1985

GEOGRAPHIC REGION	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
Pacific	$33,600	$35,909	$38,000	$39,112	$50,000	$51,486
Mountain	32,000	32,972	38,000	39,493	45,900	48,676
West North Central	32,000	34,532	36,000	40,214	46,000	49,436
West South Central	35,000	37,437	40,000	42,543	50,000	52,650
East North Central	32,500	34,622	38,800	40,202	48,000	49,822
East South Central	33,400	34,447	36,600	38,754	47,000	49,193
Middle Atlantic	34,000	35,908	38,400	40,943	50,000	51,529
South Atlantic	33,000	35,185	37,000	39,134	48,000	49,930
New England	32,800	35,698	39,300	40,880	48,450	50,456
All Regions	33,000	35,435	38,400	40,391	49,000	50,704

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 68

1985 MEDIAN AND MEAN SALARIES OF NON-ACADEMIC CHEMISTS* BY DEGREE LEVEL AND SELECTED STATES

SELECTED STATES	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
California	$33,000	$35,635	$37,900	$38,950	$49,900	$51,548
Texas	33,000	35,602	38,000	39,727	48,000	50,754
Illinois	31,000	33,903	40,000	41,240	48,500	50,152
Michigan	32,000	34,454	36,000	39,048	47,600	49,557
Ohio	34,000	36,045	39,600	40,151	47,200	48,397
New Jersey	35,000	36,733	40,000	42,134	50,000	52,865
New York	34,000	35,288	38,150	40,558	50,000	51,727
Pennsylvania	33,000	34,865	36,500	39,153	49,000	50,313
Florida	30,000	31,523	36,000	38,495	41,000	44,756
Total All States	32,500	34,887	38,000	39,770	48,000	50,237

* Includes only members of the American Chemical Society.

TABLE 69

MEDIAN AND MEAN SALARIES OF EMPLOYED FULL-TIME CHEMISTS* IN PRIVATE INDUSTRY BY DEGREE LEVEL AND TOTAL NUMBER OF SUBORDINATES, 1985

TOTAL NO. OF SUBORDINATES	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
0	$28,000	$30,058	$33,000	$34,779	$42,000	$44,161
1-2	32,400	34,355	37,000	38,249	44,200	46,343
3-7	35,000	35,866	38,550	39,758	48,000	49,194
8-12	38,000	39,158	45,000	45,925	53,000	53,713
13-17	40,000	42,114	45,000	46,499	57,000	56,440
18-22	41,000	42,583	46,500	48,003	59,750	57,285
23-32	44,750	46,287	48,550	49,079	60,000	60,595
33-47	45,000	48,297	50,000	51,718	63,000	62,710
48-67	47,000	46,293	51,000	52,760	66,000	63,409
68-99	52,000	52,593	52,500	55,243	67,450	66,556
> = 100	60,000	55,909	53,250	58,300	70,000	68,624
TOTAL	32,500	34,862	38,000	39,718	48,000	49,479

*Includes only members of the American Chemical Society.
** Less than 5 respondents.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 70

MEDIAN AND MEAN SALARIES OF EMPLOYED NON-ACADEMIC CHEMICAL ENGINEERS* BY DEGREE LEVEL AND YEARS SINCE B. S., 1985

YEARS SINCE B.S.	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
0-1	$27,150	$25,325	$	$	$	$
2-4	28,700	28,136	30,300	30,919		
5-9	33,000	33,745	35,000	35,032	40,000	40,864
10-14	36,000	36,059	39,800	40,088	43,500	44,968
15-19	40,000	40,286	41,250	44,496	55,000	54,460
20-24	41,100	46,694	45,000	47,850	61,750	59,377
25-29	50,000	53,360	45,000	50,443	68,250	66,904
30-34	53,000	54,672	63,000	58,967	69,000	66,464
35-39	45,000	51,130	66,000	62,963	66,500	64,696
> = 40	48,150	54,543	58,500	56,218	67,000	66,812
All Years	38,200	42,709	41,050	46,418	55,900	57,446

* Includes only members of the American Chemical Society.

SOURCE: Industrial Chemical News, October 1985

TABLE 71

AVERAGE SALARIES OF INDUSTRIAL CHEMISTS BY YEARS OF EXPERIENCE AND DEGREE LEVEL, 1985

YEARS OF EXPERIENCE	DEGREE LEVEL		
	B.S.	M.S.	PH.D
0	$25,968	$30,420	$37,608
5	31,980	36,024	47,244
10	40,812	45,204	52,848
Overall	34,271	37,181	49,505

SOURCE: Industrial Chemical News, October 1985

TABLE 72

AVERAGE SALARIES OF INDUSTRIAL CHEMISTS BY GEOGRAPHIC REGION, 1984-85

GEOGRAPHIC REGION	SALARY	% Who Work in Area
Northeast	$40,247	39
Southeast	38,860	15
Midwest	39,825	29
Southwest	43,920	12
Northwest	32,956	4

TABLE 73

AVERAGE SALARIES OF INDUSTRIAL CHEMISTS BY WORK FUNCTION, 1984-85

WORK FUNCTION	SALARY	% Who Work in Area
Quality Control	$33,667	10.6
Analysis	32,879	15.4
R & D Management	53,050	8.0

TABLE 74

AVERAGE SALARIES OF INDUSTRIAL CHEMISTS BY SELECTED EMPLOYERS, 1984-85

SELECTED EMPLOYERS	SALARY
Government	$34,615
Chemical Industry	43,990
Rubber Industry	44,387

SOURCE: American Institute of Chemists, The Chemist, January 1985

TABLE 75

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY TYPE OF EMPLOYER AND DEGREE, 1984

TYPE OF EMPLOYER	B. S.	M. S.	Ph. D.
Industry	$42,750	$48,550	$54,000
Academic	8,200	13,500	42,000
Non-Profit		36,500	53,200
Government	26,000	47,000	50,000
Self-Employed	39,500	35,000	36,500
Total Salary	33,000	40,000	49,000
Total Income	39,500	42,000	50,000

TABLE 76

MEDIAN ANNUAL SALARIES OF MEMBERS OF THE AIC* BY DEGREE LEVEL AND SPECIALTY, 1984

DEGREE SPECIALITY	B. S.	M. S.	Ph. D.
Analytical	$30,000	$39,000	$45,000
Biochemistry			47,200
Inorganic	30,000		40,000
Organic	25,000	42,776	48,450
Physical			52,550
Polymer			50,000
Chemical Engineering	38,400	49,000	54,000
Other	45,000	43,500	55,000

TABLE 77

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY WORK ACTIVITY AND DEGREE LEVEL, 1984

WORK ACTIVITY	B. S.	M. S.	Ph. D.
Research and Development	$33,000	$40,000	$50,000
Management	50,000	58,000	60,000
Sales, Services	35,500	42,800	58,050
Consulting	32,500	30,000	39,000
Teaching	8,500	32,000	39,500
Other	8,000	9,450	30,000

TABLE 78

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1984

GEOGRAPHICAL REGION	B. S.	M. S.	Ph. D.
Pacific	$31,125	$42,700	$56,000
Mountain			40,000
West North Central			51,000
East North Central	25,000	38,228	50,000
West South Central	30,500	30,500	45,000
East South Central			54,500
Middle Atlantic	37,000	41,000	50,000
South Atlantic	39,500	45,000	45,000
New England	42,000		46,500

*American Institute of Chemists.

SOURCE: American Mathematical Society, NOTICES, Vol. 31, No. 7, November 1984

TABLE 79

MEDIAN SALARIES IN MATHEMATICS FOR PH.D.'S WITH ONE YEAR OF EXPERINCE BY TYPE OF EMPLOYER AND SEX, 1984

TYPE OF EMPLOYER	MEN	WOMEN
Teaching or Teaching & Research (9 months)	$23,000	$22,800
Teaching or Teaching & Research (12 months)	24,800	27,500
Research (12 months) - Academic	27,600	21,000
Business & Industry (12 months)	35,900	33,600
Government (12 months)	30,500	

SOURCE: American Psychological Association, Salaries in Psychology, 1985, August 1985

TABLE 80

MEDIAN SALARIES OF PSYCHOLOGISTS BY TYPE OF POSITION AND DEGREE LEVEL, 1985

TYPE OF POSITION	DOCTORAL LEVEL	MASTER'S LEVEL
Faculty Position*	$32,000	$26,000
Educational Administration	44,000	37,889
Research Positions	40,000	31,500
Administration of Research	52,000	46,000
Direct Human Services (Clinical)	40,000	27,500
Direct Human Services (Counseling)	34,000	29,667
Direct Human Services (School)*	30,000	27,818
Direct Human Services (Other Psychology)	38,000	26,000
Administration of Human Services	40,000	33,000
Applied Psychology (Industrial/ Organizational)	52,000	40,000
Applied Psychology	44,000	38,000
Administration of Applied Psychology	51,667	42,000
Other Administrative Positions	49,000	47,500
Other Types of Positions	48,444	40,000

*These salaries are on a 9 to 10 month basis; all other salaries are on a 11 to 12 month basis.

SOURCE: American Psychological Association, Salaries in Psychology, 1985, August 1985.

TABLE 81

MEDIAN AND MEAN SALARIES OF DOCTORAL-LEVEL PSYCHOLOGISTS+ ON 11-12 MONTH BASIS BY TYPE OF POSITION AND YEARS OF WORK EXPERIENCE, 1985

TYPE OF POSITION	YEARS OF WORK EXPERIENCE							
	0-1	2-4	5-9	10-14	15-19	20-24	25-29	30+
EDUCATIONAL ADMINISTRATION								
Median	$	$29,500	$32,000	$37,000	$47,000	$47,000	$54,000	$50,500
Mean		29,444	34,217	37,411	46,852	47,604	54,711	52,530
RESEARCH								
Median	23,000	29,000	35,500	40,000	40,500	50,500	55,000	60,000
Mean	29,000	29,155	37,322	41,102	48,242	52,466	55,179	60,413
RESEARCH ADMINISTRATION								
Median		29,500	42,500	45,611	52,000	64,000	59,000	67,000
Mean		31,300	45,139	47,436	53,951	64,930	59,721	67,083
DIRECT HUMAN SERVICES (Clinical Psychology)								
Median	27,000	30,000	38,000	44,000	49,000	47,500	47,000	48,000
Mean	28,164	33,611	43,801	49,906	53,610	52,794	52,284	54,019
DIRECT HUMAN SERVICES (Counseling Psychology)								
Median	26,000	27,500	31,500	35,000	36,000	40,778	45,222	49,000
Mean	27,286	28,943	35,428	41,907	41,981	42,029	48,419	51,011
DIRECT HUMAN SERVICES* (School Psychology)								
Median		24,000	25,364	30,000	34,273	33,273	36,500	32,727
Mean		24,198	26,226	30,987	34,647	34,542	36,083	34,197
DIRECT HUMAN SERVICES (Other Psychology)								
Median		30,500	32,000	41,778	37,000	39,000	54,500	62,500
Mean		31,460	37,923	47,479	39,588	46,086	62,256	63,333
ADMINISTRATION OF HUMAN SERVICES								
Median		31,000	36,000	40,000	43,000	44,000	46,000	47,500
Mean		32,622	37,421	40,347	45,629	46,167	50,145	49,405
APPLIED PSYCHOLOGY (Industrial/Org. Psych)								
Median		37,000	45,000	59,500	64,000	67,500	72,000	75,000
Mean		39,171	49,315	61,403	64,667	64,705	69,800	71,514
APPLIED PSYCHOLOGY (Other Psychology)								
Median		39,000	40,000	44,000	54,000	43,000	54,000	60,000
Mean		39,248	43,175	45,625	56,905	51,185	50,300	58,765
ADMINISTRATION OF APPLIED PSYCHOLOGY								
Median		35,000	44,000	46,000	56,500	58,000	66,000	64,278
Mean		34,214	48,825	48,909	59,785	66,473	66,783	69,292
OTHER ADMINISTRATIVE								
Median		38,000	42,000	45,000	48,000	50,000	61,000	60,000
Mean		35,923	43,316	51,475	54,745	49,231	62,756	63,933
OTHER								
Median		29,000	40,500	53,000	50,000	60,000	60,000	64,000
Mean		30,795	45,727	55,556	55,242	64,543	55,909	61,789

+Members of the American Psychological Association. *9-10 Month Salaries.

NOTE: Blanks indicate fewer than 5 respondents.

SOURCE: American Psychological Association, Salaries in Psychology, 1985, August 1985.

TABLE 82

MEDIAN AND MEAN SALARIES OF MASTERS-LEVEL PSYCHOLOGISTS+ ON 11-12 MONTH BASIS BY TYPE OF POSITION AND YEARS OF WORK EXPERIENCE, 1985

TYPE OF POSITION	YEARS OF WORK EXPERIENCE						
	2-4	5-9	10-14	15-19	20-24	25-29	30+
EDUCATIONAL ADMINISTRATION							
Median	$	$30,000	$36,667	$39,500	$44,000	$38,000	$47,000
Mean		30,200	36,873	38,130	42,315	43,400	46,333
RESEARCH							
Median	23,500	29,000	31,000		51,500		
Mean	23,583	30,000	31,800		52,333		
RESEARCH ADMINISTRATION							
Median		38,000				53,000	
Mean		36,600				53,400	
DIRECT HUMAN SERVICES (Clinical Psychology)							
Median	21,000	25,000	30,000	30,500	29,000	32,000	35,000
Mean	22,684	27,291	32,267	31,800	45,111	37,083	39,469
DIRECT HUMAN SERVICES (Counseling Psychology)							
Median		22,500	35,000	34,000			
Mean		22,643	36,191	43,857			
DIRECT HUMAN SERVICES* (School Psychology)							
Median	20,500	22,000	27,000	30,636	30,000	33,000	31,364
Mean	22,591	23,439	27,633	30,058	30,758	32,409	31,403
DIRECT HUMAN SERVICES (Other Psychology)							
Median	23,000	25,500	29,000	25,000			
Mean	23,143	26,500	30,948	34,857			
ADMINISTRATION OF HUMAN SERVICES							
Median	23,000	24,500	32,000	34,000	39,500	40,000	45,000
Mean	26,800	25,630	33,852	32,688	41,667	46,800	47,058
APPLIED PSYCHOLOGY (Industrial/Org. Psych)							
Median	31,500	34,500	33,500	45,000		48,000	45,000
Mean	32,200	34,917	34,667	46,889		52,778	49,667
APPLIED PSYCHOLOGY (Other Psychology)							
Median						46,000	
Mean						42,905	
ADMINISTRATION OF APPLIED PSYCHOLOGY							
Median		33,500	37,500	48,000	45,000	60,000	51,500
Mean		33,875	37,333	45,600	50,833	65,000	57,500
OTHER ADMINISTRATIVE							
Median		35,000	37,000	36,000	53,000	60,000	69,500
Mean		35,033	41,200	40,250	56,571	59,000	67,214
OTHER							
Median			29,000	60,000		46,400	
Mean			34,328	63,185		46,844	

+Members of the American Psychological Association. *9-10 Month Salaries.

NOTE: Blanks indicate salaries not provided for those positions with fewer than 5 respondents.

SOURCE: American Institute of Physics, 1983 Salaries, Society Membership Survey, August 1985

TABLE 83

1981 AND 1983 SALARIES OF GRADUATE PHYSICISTS* CONTINUING IN THE SAME PRINCIPAL WORK ACTIVITY BY DEGREE LEVEL

PRINCIPAL WORK ACTIVITY	Ph.Ds			MASTER'S		
	NO.	MEDIAN	MEAN	NO.	MEDIAN	MEAN
Teaching						
1981		$28,400	$29,500		$25,000	$24,500
1983	574	32,000	33,400	156	28,000	27,600
Basic Research						
1981		34,200	34,900			
1983	735	40,000	41,200			
Applied Research						
1981		38,500	39,400		35,800	36,700
1983	514	45,400	46,900	74	41,500	43,700
Development						
1981		40,000	40,400		36,000	37,800
1983	130	46,200	47,600	59	42,700	43,700
Design/Engineering						
1981		39,000	39,400		34,600	36,700
1983	77	46,300	47,600	60	43,000	43,400
Administration						
1981		50,000	51,600		45,000	47,200
1983	273	58,300	59,300	62	51,500	54,000

* Members of the AIP Member Societies

SOURCE: American Institute of Physics, 1983 Salaries, Society Membership Survey, August 1985

TABLE 84

1983 SALARIES OF PH.D PHYSICISTS* BY YEARS SINCE PH.D.

YEARS SINCE PH.D.	NO.	MEDIAN	MEAN
0-4	521	$31,000	$30,700
5-9	672	37,200	36,900
10-14	741	41,200	41,900
15-19	642	44,000	44,700
20-24	436	48,000	48,300
25-29	283	49,600	51,200
30+	314	51,200	53,100

*Includes only members of the AIP member societies.

TABLE 85

1983 SALARIES OF PHYSICISTS* BY TYPE OF EMPLOYER AND DEGREE LEVEL

EMPLOYER	Ph.Ds			MASTER'S		
	NO.	MEDIAN	MEAN	NO.	MEDIAN	MEAN
University						
9-10 month	834	$34,000	$35,200	18	$28,000	$27,900
11-12 month	518	36,600	37,700	23	34,400	34,400
4-Year College						
9-10 month	143	26,100	27,200	28	25,500	25,700
Junior College				50	28,000	27,500
Industry/Self-Employed	1,019	47,700	50,700	336	43,000	45,100
Government	361	45,400	46,300	97	42,000	42,800
FFR&DC**	406	45,500	46,300	35	41,000	41,600
Secondary School				146	26,400	26,900
Nonprofit	124	42,400	43,800	43	38,000	39,500

*Includes only members of the AIP member societies.
**Federally-funded research and development centers.

SOURCE: American Institute of Physics, 1983 Salaries, Society Membership Survey, August 1985

TABLE 86

1983 MEDIAN AND MEAN SALARIES OF PHYSICISTS* BY YEARS SINCE DEGREE TYPE OF EMPLOYER AND DEGREE LEVEL

TYPE OF EMPLOYER & DEGREE LEVEL	YEARS SINCE DEGREE						
	0-4	5-9	10-14	15-19	20-24	20+	25+
INDUSTRY							
Ph.Ds							
Median	$39,000	$44,300	$50,000	$55,000	$57,100	$	$60,000
Mean	39,100	45,300	51,800	56,400	58,900		63,800
MASTER'S							
Median	31,400	36,300	42,200	50,000		50,000	
Mean	32,100	38,000	45,200	50,300		52,200	
GOVERNMENT							
Ph.Ds							
Median	32,300	37,000	43,200	48,000	54,700		63,100
Mean	33,000	37,000	43,500	48,600	54,700		59,500
MASTER's							
Median	33,500	36,000	40,500	42,500		48,000	
Mean	34,200	37,200	40,100	43,400		48,400	
UNIVERSITY 11-12 Month							
Ph.Ds							
Median	25,200	31,000	38,000	43,400	48,500		51,100
Mean	27,600	32,500	39,400	45,500	49,500		53,100
UNIVERSITY 9-10 Month							
Ph.Ds							
Median	23,000	25,100	29,500	33,000	39,000		42,200
Mean	24,200	26,400	30,100	34,500	39,600		42,800
SECONDARY SCHOOL							
MASTER'S							
Median	20,500	23,000	25,900	29,500		28,900	
Mean	21,600	24,000	26,600	29,500		28,400	
FFR&DC**							
Ph.Ds							
Median	35,000	39,600	44,100	49,700	53,400		51,700
Mean	33,600	39,000	44,300	50,700	54,700		55,500

*Members of the AIP Member Societies **Federally funded R & D Centers

SOURCE: American Institute of Physics, 1983 Salaries, Society Membership Survey, August 1985

TABLE 87

1981 AND 1983 SALARIES OF PHYSICISTS* BY EMPLOYMENT SECTOR AND SEX

EMPLOYMENT SECTOR	MALE			FEMALE		
	NO.	MEDIAN	MEAN	NO.	MEDIAN	MEAN
Academic						
1981		$30,000	$31,600		$24,000	$25,500
1983	1,298	34,000	36,200	77	28,500	30,000
Non-Academic						
1981		40,000	42,100		34,500	35,200
1983	1,634	47,000	49,100	69	41,900	42,500
Industry (1983)						
0-4 Years Since Degree	247	37,000	36,700	22	34,400	34,200
5-9 Years Since Degree	341	42,000	42,500	26	36,000	36,800
10+ Years Since Degree	986	50,700	53,600	15	43,500	43,500

TABLE 88

1983 SALARIES OF PHYSICISTS* BY TYPE OF EMPLOYER AND SEX

TYPE OF EMPLOYER	MALE			FEMALE		
	NO.	MEDIAN	MEAN	NO.	MEDIAN	MEAN
Universities & Colleges (9-10 month) Professors & Assoc. Prof. (Ph.Ds)	793	$35,000	$36,300	27	$32,900	$32,800
Universities & Colleges (9-10 month) Junior Faculty (Ph.Ds)	146	24,000	24,300	19	21,000	21,700
Universities (11-12 month) Junior Faculty (Ph.Ds)	128	31,400	32,500	17	27,100	28,100
Secondary Schools (All Degrees)	165	25,000	26,200	23	25,500	23,500
Industry (All Degrees)	1,539	46,000	48,800	58	37,500	38,200
Government, National Labs & Nonprofit Orgs. (Ph.Ds & Master's)	974	45,000	46,300	58	40,700	40,700

TABLE 89

1983 SALARIES OF PH.D PHYSICISTS* BY GEOGRAPHIC REGION

GEOGRAPHIC REGION	NO.	MEDIAN	MEAN
New England	312	$42,000	$42,700
Middle Atlantic	714	42,000	43,300
South Atlantic	604	41,800	42,900
East North Central	487	37,500	38,900
East South Central	130	36,000	36,500
West North Central	155	34,900	35,100
West South Central	211	40,000	40,300
Mountain	300	42,000	43,600
Pacific	709	44,700	45,700

*Includes only members of the AIP member societies.

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 90

NUMBER, MEAN AND MEDIAN SALARIES AND COMPENSATION OF DATA PROCESSING PERSONNEL
BY JOB TITLE, AUGUST 1984

JOB TITLE	SALARY			TOTAL COMPENSATION		
	Number Reported	Mean	Median	Number Reported	Mean	Median
Top MIS/IS Officer	47	$46,890	$45,000	43	$50,252	$50,200
Top MIS/dp Officer	303	41,002	39,200	269	43,941	40,675
Top Data Processing Manager	253	37,282	36,000	229	38,423	37,800
Asst. Data Processing Manager	122	34,885	36,750	111	35,394	37,000
Data Base Manager	98	36,208	35,663	91	36,372	36,000
Data Base Analyst/Programmer	175	34,157	36,000	144	32,094	32,080
Project Team Leader	596	37,604	38,750	525	38,779	40,280
Computer Systems Analysis/Programming Manager/Supervisor	175	39,550	42,000	162	42,730	43,000
Lead Systems Analyst/Programmer	213	34,362	34,000	208	34,782	34,000
Senior Systems Analyst/Programmer	181	31,262	31,000	156	31,602	31,570
Junior Systems Analyst/Programmer	82	26,027	24,000	73	26,647	24,000
Computer Systems Analysis/Applications Programming Manager/Supervisor	99	37,776	38,629	85	39,649	38,629
Lead Systems Analyst/Applications Programmer	291	32,698	34,000	226	33,025	34,000
Senior Systems Analyst/Applications Programmer	538	30,503	29,431	419	29,533	29,000
Junior Systems Analyst/Applications Programmer	408	24,362	24,629	368	24,411	24,629
Systems Analysis Manager/Supervisor	92	37,537	37,876	86	37,659	38,500
Lead Systems Analyst	225	35,514	35,202	164	36,432	35,467
Senior Systems Analyst	769	33,297	33,250	686	33,442	33,773
Junior Systems Analyst	433	29,227	27,500	317	27,375	25,875
Systems Programming Manager/Supervisor	106	37,659	38,502	97	38,840	39,600
Lead Systems Programmer	124	35,561	36,300	108	35,726	36,096
Senior Systems Programmer	350	30,588	30,357	261	31,460	31,500
Junior Systems Programmer	319	24,280	23,115	271	24,053	23,115
Systems Programmer Trainee	74	20,552	20,000	42	21,066	20,950
Applications Programming Manager/Supervisor	109	37,811	37,500	103	39,121	38,500
Lead Applications Programmer	563	32,221	32,000	497	33,253	35,000
Senior Applications Programmer	1,272	27,209	26,904	1,062	27,817	27,000
Junior Applications Programmer	1,199	22,916	22,000	1,090	22,811	24,000
Applications Programmer Trainee	556	18,663	17,500	497	18,100	17,500
Documentation Specialist	64	18,270	17,068	58	18,156	16,549
User Support Coordinator	200	24,183	24,000	182	25,307	24,575
Communications Manager	80	33,206	34,400	72	33,269	33,500
Communications Operator	141	21,110	20,965	116	21,020	20,965
Computer Operations Manager/Supervisor	438	28,959	31,997	409	30,066	34,140
Computer I/O Control Manager/Supervisor	134	21,288	19,750	119	21,347	19,600
Computer I/O Control Clerk	463	15,686	15,123	399	15,628	15,000
Lead Computer Operator	323	19,750	19,240	289	19,912	19,400
Senior Computer Operator	1,000	17,840	17,673	900	18,089	17,760
Junior Computer Operator	932	16,140	16,603	870	16,322	16,993
Tape Librarian	91	14,516	13,500	85	14,742	13,500
Key Entry Supervisor	182	18,239	18,000	164	18,146	18,000
Lead Key Entry Operator	254	15,503	16,000	219	15,662	16,000
Senior Key Entry Operator	764	13,801	13,312	647	14,179	13,586
Junior Key Entry Operator	798	11,979	12,000	734	11,911	12,000

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 91

MEDIAN ANNUAL SALARIES OF DATA PROCESSING PERSONNEL BY JOB TITLE AND TYPE OF EMPLOYER, AUGUST 1984

JOB TITLE	TYPE OF EMPLOYER			
	All Mfg./ Extractive Employers	All Non-Mfg. Employers	Educational Institutions	Government
Top MIS/IS Officer	$45,000	$44,775	$40,325	$38,693
Top MIS/dp Officer	39,786	38,780	37,500	34,650
Top Data Processing Manager	35,500	36,088	32,500	40,557
Asst. Data Processing Manager	30,000	37,000	37,500	40,104
Data Base Manager	36,694	34,791	36,463	32,200
Data Base Analyst/Programmer	40,000	28,200	27,305	26,406
Project Team Leader	38,595	38,750	33,000	33,700
Computer Systems Analysis/Programming Manager/Supervisor	41,500	42,000	36,540	35,256
Lead Systems Analyst/Programmer	36,890	34,000	28,000	35,000
Senior Systems Analyst/Programmer	31,950	31,000	28,750	28,695
Junior Systems Analyst/Programmer	26,750	20,800		
Computer Systems Analysis/Applications Programming Manager/Supervisor	45,782	38,000	38,000	34,454
Lead Systems Analyst/Applications Programmer	34,000	32,200	30,415	31,595
Senior Systems Analyst/Applications Programmer	30,000	29,000	27,236	28,000
Junior Systems Analyst/Applications Programmer	27,000	21,550	18,774	20,000
Systems Analysis Manager/Supervisor	46,000	37,500	24,500	37,626
Lead Systems Analyst	36,000	35,000	30,000	26,292
Senior Systems Analyst	39,000	32,200	30,000	33,773
Junior Systems Analyst	39,494	26,700	26,700	25,000
Systems Programming Manager/Supervisor	41,392	37,100	36,576	38,004
Lead Systems Programmer	36,100	36,300	36,300	33,441
Senior Systems Programmer	31,675	30,000	28,000	30,100
Junior Systems Programmer	28,000	23,115	20,487	28,000
Systems Programmer Trainee	19,900	20,000		18,500
Applications Programming Manager/Supervisor	36,500	37,500	30,000	37,500
Lead Applications Programmer	35,000	32,000	28,000	28,750
Senior Applications Programmer	27,000	26,540	24,693	26,212
Junior Applications Programmer	24,000	21,330	19,425	21,300
Applications Programmer Trainee	21,000	17,500	16,000	16,500
Documentation Specialist	18,170	16,998	17,596	14,225
User Support Coordinator	23,736	25,000	21,708	22,092
Communications Manager	40,100	32,400	34,510	32,000
Communications Operator	21,900	20,965		15,755
Computer Operations Manager/Supervisor	27,600	33,000	27,012	24,429
Computer I/O Control Manager/Supervisor	24,120	19,500	16,417	21,020
Computer I/O Control Clerk	16,334	14,569	14,569	16,421
Lead Computer Operator	21,120	19,000	18,614	19,536
Senior Computer Operator	18,000	17,628	17,412	21,000
Junior Computer Operator	15,288	17,200	13,992	19,000
Tape Librarian	14,832	13,000	13,858	12,000
Key Entry Supervisor	18,500	18,000	17,210	18,000
Lead Key Entry Operator	14,790	16,000	16,410	16,000
Senior Key Entry Operator	13,052	13,600	13,992	13,000
Junior Key Entry Operator	8,000	13,500	12,508	12,545

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 92

MEDIAN ANNUAL SALARIES OF DATA PROCESSING PERSONNEL BY JOB TITLE AND LEVEL OF EDUCATION, AUGUST 1984

JOB TITLE	LEVEL OF EDUCATION						
	High School Diploma	Some College No Degree	Associate Degree	Bachelor Degree	MA/MS Degree	MBA Degree	Doctoral Degree
Top MIS/IS Officer	$	$51,200	$	$44,500	$40,000	$52,240	$
Top MIS/dp Officer	38,000	35,250	36,839	39,770	40,475	50,000	38,536
Top Data Processing Manager	42,000	35,000	35,000	35,688	35,947	56,500	
Asst. Data Processing Manager	28,625	26,000	39,000	38,017	40,020		
Data Base Manager		36,050	32,200	37,000	36,000		
Data Base Analyst/Programmer	21,239	26,000	27,305	37,448			
Project Team Leader	20,000	34,454	33,700	38,750	44,000	40,000	
Computer Systems Analysis/Programming Manager/Supervisor		34,374	35,623	45,000	41,000	34,188	
Lead Systems Analyst/Programmer		34,000	35,000	30,000	46,000		
Senior Systems Analyst/Programmer	24,197	28,500	31,570	31,000	34,000		
Junior Systems Analyst/Programmer	23,114	20,000	20,326	27,000			
Computer Systems Analysis/Applications Programming Manager/Supervisor		34,454	38,629	36,780	47,400	47,226	
Lead Systems Analyst/Applications Programmer		34,000	30,415	32,200	39,700		
Senior Systems Analyst/Applications Programmer	28,500	30,000	27,236	30,000	33,000	41,446	
Junior Systems Analyst/Applications Programmer	30,000	25,000	24,000	23,000		15,000	
Systems Analysis Manager/Supervisor		39,076	35,000	39,500	37,500	47,000	
Lead Systems Analyst		35,202	30,200	30,380	40,000	35,000	39,124
Senior Systems Analyst	36,153	28,000	30,000	32,232	34,930	36,218	43,000
Junior Systems Analyst	25,000	21,000	25,377	32,000	30,500	34,135	
Systems Programming Manager/Supervisor	39,000	40,972	30,500	37,000	44,804		
Lead Systems Programmer	38,000	33,958	36,300	36,908	40,000		
Senior Systems Programmer	31,500	30,700	29,471	30,000	36,000		
Junior Systems Programmer	24,000	26,881	23,115	23,070			
Systems Programmer Trainee		18,000	24,000	20,000			
Applications Programming Manager/Supervisor		34,750	32,300	37,500	46,820		
Lead Applications Programmer	28,750	30,244	28,200	32,000	27,600		
Senior Applications Programmer	26,212	25,000	25,196	28,404	24,850		
Junior Applications Programmer	26,261	22,023	20,200	23,000		25,800	28,650
Applications Programmer Trainee	18,000	17,000	18,600	17,500			24,310
Documentation Specialist	14,850	15,360	24,000	24,954			
User Support Coordinator	21,306	23,000	23,286	25,000	25,000		
Communications Manager	28,000	31,000	38,400	36,550	32,000		
Communications Operator	19,550	24,500	23,000				
Computer Operations Manager/Supervisor	22,800	26,000	24,800	33,000			
Computer I/O Control Manager/Supervisor	23,905	23,250	32,438	19,500			
Computer I/O Control Clerk	14,569	14,560	12,682				
Lead Computer Operator	19,033	20,000	19,000	20,000			
Senior Computer Operator	17,035	19,250	15,900	16,000			
Junior Computer Operator	14,000	19,000	12,100	14,000			
Tape Librarian	14,248	12,000					
Key Entry Supervisor	17,210	18,000				19,800	
Lead Key Entry Operator	15,040	16,000		12,750			
Senior Key Entry Operator	13,312	14,000	15,000				
Junior Key Entry Operator	12,545	8,000	11,000	18,200			

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 93

MEDIAN ANNUAL SALARIES OF DATA PROCESSING PERSONNEL BY JOB TITLE AND LENGTH OF EXPERIENCE, AUGUST 1984

JOB TITLE	LENGTH OF EXPERIENCE							
	Under 1 Year	1 or 2 Years	3 or 4 Years	5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 or More
Top MIS/IS Office	$	$	$44,000	$41,500	$49,500	$47,000	$65,000	$53,389
Top MIS/dp Officer	28,500	31,000	31,000	36,500	41,000	39,650	42,000	48,000
Top Data Processing Manager			30,000	33,000	36,000	41,000	41,000	44,749
Asst. Data Processing Manager		20,000	23,500	30,400	40,762	40,000	45,900	43,836
Data Base Manager			35,926	32,600	37,677			
Data Base Analyst/Programmer	22,000	24,494	29,500	37,000	33,820			
Project Team Leader	27,000	24,750	34,000	36,000	39,430	41,500		
Computer Systems Analysis/Programming Manager/Supervisor			33,200	36,000	41,772	45,000	35,000	
Lead Systems Analyst/Programmer	30,000		28,000	34,000	35,000	34,000	36,890	
Senior Systems Analyst/Programmer	31,000		27,000	28,695	38,000	34,500	35,000	
Junior Systems Analyst/Programmer	20,000	24,000	20,800	33,000				
Computer Systems Analysis/Applications Programming Manager/Supervisor	22,500		30,227	42,500	38,000	45,782		
Lead Systems Analyst/Applications Programmer			27,393	34,000	33,787	37,800		
Senior Systems Analyst/Applications Programmer		25,000	29,000	30,000	32,700	29,258		
Junior Systems Analyst/Applications Programmer	20,500	20,000	26,340	26,000	29,000			
Systems Analysis Manager/Supervisor	24,000	22,653		37,752	41,500	41,500		
Lead Systems Analyst		26,292	39,124	35,202	48,809	35,000		
Senior Systems Analyst		27,500	31,944	33,773	32,000	36,153		
Junior Systems Analyst	30,755	21,000	28,260	30,122	35,440			
Systems Programming Manager/Supervisor		24,500	35,000	37,100	43,577	42,825		
Lead Systems Programmer			34,800	34,475	40,320	33,441		
Senior Systems Programmer		25,000	30,000	32,760	34,000	33,500		
Junior Systems Programmer	15,750	22,000	27,694	28,187				
Systems Programmer Trainee	20,000	23,000	25,700					
Applications Programming Manager/Supervisor				37,500	36,000	42,000		
Lead Applications Programmer		26,236	30,635	32,000	34,625	35,220	32,034	
Senior Applications Programmer	28,000	26,000	28,000	29,362	25,000	26,000	15,000	
Junior Applications Programmer	20,500	21,000	26,261	23,062	25,000	25,800		
Applications Programmer Trainee	17,500	20,500	17,400					
Documentation Specialist	14,155	14,000	23,911	19,422	24,000			
User Support Coordinator	25,000	22,950	21,250	27,840	32,311	62,000		
Communications Manager			28,500	33,500	37,256	34,621		
Communications Operator	16,000	23,000	20,100	28,000	31,415			
Computer Operations Manager/Supervisor		33,000	23,000	25,500	26,816	33,870	31,000	32,134
Computer I/O Control Manager/Supervisor	13,785	17,900	22,900	20,200	20,500	25,398		
Computer I/O Control Clerk	14,560	15,808	16,021	15,062	15,000	26,000		
Lead Computer Operator	15,180	17,892	19,000	21,000	20,400	23,820	18,865	
Senior Computer Operator	16,500	16,750	16,700	18,404	21,000	19,871		
Junior Computer Operator	14,000	15,020	15,008	16,603	19,000			
Tape Librarian	13,500	14,832	15,000	17,479	12,000			
Key Entry Supervisor	16,200	18,395	16,000	19,699	18,000	18,210	23,640	
Lead Key Entry Operator	13,000	16,151	14,383	15,780	16,000			
Senior Key Entry Operator	13,037	13,000	14,283	13,208	14,170	13,920		
Junior Key Entry Operator	10,692	14,000	11,350	12,480	20,800			

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 94

MEDIAN ANNUAL SALARIES OF DATA PROCESSING PERSONNEL BY JOB TITLE AND GEOGRAPHICAL AREA, AUGUST, 1984

JOB TITLE	GEOGRAPHICAL AREA						
	North-Eastern States	Southern States	Mid-western States	North Central States	South western States	Mountain States	Pacific States
Top MIS/IS Officer	$52,000	$39,975	$38,300	$	$45,000	$	$52,000
Top MIS/dp Officer	40,000	39,315	37,500	38,450	37,000	44,056	41,000
Top Data Processing Manager	37,958	35,000	35,000	30,800	36,018	37,418	41,000
Asst. Data Processing Manager	37,000	40,000	38,460	28,522	29,800	40,164	37,000
Data Base Manager	36,240	33,000	40,000	30,600	25,812	35,743	36,000
Data Base Analyst/Programmer	23,000	28,200	37,000	21,400	40,000	28,457	29,250
Project Team Leader	38,750	33,850	33,603	29,500	45,036	35,800	42,000
Computer Systems Analysis/Programming Manager/Supervisor	45,000	34,500	35,623	32,845	44,000		41,076
Lead Systems Analyst/Programmer	30,000	31,000	29,000	25,200	35,000		37,000
Senior Systems Analyst/Programmer	31,000	26,581	29,000	30,675	33,000		37,275
Junior Systems Analyst/Programmer	20,000	28,000	24,000	29,000			40,000
Computer Systems Analysis/Applications Programming Manager/Supervisor	39,000	36,228	41,889	22,500	32,700	38,629	47,226
Lead Systems Analyst/Applications Programmer	34,000	39,700	33,787	24,500		32,200	27,000
Senior Systems Analyst/Applications Programmer	32,460	25,325	27,768	25,800	39,432	27,497	32,000
Junior Systems Analyst/Applications Programmer	28,000	22,750	25,000	20,500	22,200	26,380	20,000
Systems Analysis Manager/Supervisor	40,000	41,500	40,152			24,764	38,876
Lead Systems Analyst	40,000	26,292	30,380		52,576	40,450	39,124
Senior Systems Analyst	32,232	34,930	30,000	28,000	32,000	35,000	36,218
Junior Systems Analyst	27,810	30,000	27,000		39,494	25,000	22,185
Systems Programming Manager/Supervisor	31,999	37,500	42,000	35,800	42,350	42,630	45,900
Lead Systems Programmer	35,600	30,300	36,400	36,908	39,500	36,300	37,158
Senior Systems Programmer	31,500	32,000	27,565	27,600	30,700	35,000	30,100
Junior Systems Programmer	25,000	22,000	23,115	20,375	28,000	23,800	26,941
Systems Programmer Trainee	18,000	19,500	20,000	26,400			
Applications Programming Manager/Supervisor	36,000	37,500	36,500			34,080	42,900
Lead Applications Programmer	32,000	28,200	29,564	22,680	34,700	30,000	35,000
Senior Applications Programmer	28,600	26,292	27,730	25,000	48,770	27,800	30,000
Junior Applications Programmer	21,350	20,200	22,996	25,000	25,000	23,924	25,562
Applications Programmer Trainee	17,500	18,600	18,740	17,078	14,500	18,000	23,000
Documentation Specialist	15,860	14,725	21,900		14,000		21,883
User Support Coordinator	25,000	19,500	22,603	23,129	20,000	23,736	28,800
Communications Manager	34,000	32,000	35,000			33,000	25,317
Communications Operator	22,100	20,965	16,878		16,000	20,100	27,125
Computer Operations Manager/Supervisor	24,900	25,059	25,000	24,090	31,000	25,750	33,000
Computer I/O Control Manager/Supervisor	19,500	19,422	18,843		18,860	22,900	20,220
Computer I/O Control Clerk	13,040	14,884	14,560	13,903	13,500	14,593	17,449
Lead Computer Operator	19,700	19,000	19,268	16,950	18,000	22,120	19,704
Senior Computer Operator	17,760	16,000	16,750	21,000	16,800	18,536	17,412
Junior Computer Operator	14,196	14,950	14,000	19,000	15,000	16,000	15,500
Tape Librarian	15,154	14,624	14,000	12,000		14,832	
Key Entry Supervisor	18,900	19,500	18,000	18,000	19,325	17,210	16,200
Lead Key Entry Operator	15,672	13,504	14,291	16,000	15,000	15,681	16,542
Senior Key Entry Operator	13,350	12,000	13,037	13,312	13,208	13,586	13,992
Junior Key Entry Operator	13,500	8,000	13,832	10,750	20,800	12,200	14,000

SOURCE: Abbott, Langer & Associates, Compensation in the MIS/dp Field, 2nd Edition.

TABLE 95

MEDIAN ANNUAL SALARIES AND TOTAL COMPENSATION OF DATA PROCESSING PERSONNEL BY JOB TITLE AND SEX, AUGUST 1984

JOB TITLE	MALE		FEMALE	
	Salary	Total Compensation	Salary	Total Compensation
Top MIS/IS Officer	$44,250	$45,525	$	$
Top MIS/dp Officer	40,000	41,000	29,000	28,807
Top Data Processing Manager	36,000	37,394	29,300	28,900
Asst. Data Processing Manager	37,000	37,000	19,000	19,500
Data Base Manager	36,100	36,196	27,250	27,775
Data Base Analyst/Programmer	29,379	29,882	25,674	27,353
Project Team Leader	40,280	40,280	25,438	26,500
Computer Systems Analysis/Programming Manager/Supervisor	44,000	45,900	28,300	28,900
Lead Systems Analyst/Programmer	30,628	34,574	35,000	35,000
Senior Systems Analyst/Programmer	30,000	30,000	27,000	27,000
Junior Systems Analyst/Programmer	26,500	27,200	20,326	20,326
Computer Systems Analysis/Applications Programming Manager/Supervisor	37,388	37,298	36,228	36,228
Lead Systems Analyst/Applications Programmer	33,992	33,984	18,000	18,000
Senior Systems Analyst/Applications Programmer	29,496	29,808	40,696	25,060
Junior Systems Analyst/Applications Programmer	22,500	23,000	21,000	22,162
Systems Analysis Manager/Supervisor	40,076	40,076	41,500	41,500
Lead Systems Analyst	35,900	36,000	32,750	32,050
Senior Systems Analyst	32,000	32,000	30,000	30,000
Junior Systems Analyst	27,250	27,500	24,000	24,000
Systems Programming Manager/Supervisor	40,000	41,230	24,500	29,500
Lead Systems Programmer	34,475	34,475		
Senior Systems Programmer	32,000	32,150	26,000	24,850
Junior Systems Programmer	25,000	24,918	20,000	21,000
Systems Programmer Trainee	21,000	20,950	27,500	27,500
Applications Programming Manager/Supervisor	36,500	37,800	35,000	35,000
Lead Applications Programmer	28,020	28,750	42,000	48,000
Senior Applications Programmer	25,000	25,000	29,150	30,000
Junior Applications Programmer	22,000	22,500	19,000	19,000
Applications Programmer Trainee	18,000	18,000	17,180	17,180
Documentation Specialist	21,000	18,000	17,200	16,998
User Support Coordinator	24,970	23,970	21,000	20,904
Communications Manager	38,384	37,256	22,750	23,000
Communications Operator	23,000	21,970	17,500	18,250
Computer Operations Manager/Supervisor	28,108	28,267	21,500	22,250
Computer I/O Control Manager/Supervisor	24,319	25,717	17,784	16,500
Computer I/O Control Clerk	16,120	15,000	14,331	14,503
Lead Computer Operator	20,500	21,451	18,219	20,000
Senior Computer Operator	18,355	18,355	17,272	18,404
Junior Computer Operator	19,000	19,000	18,369	19,000
Tape Librarian	14,069	14,274	13,080	13,403
Key Entry Supervisor			18,000	18,000
Lead Key Entry Operator			16,000	16,000
Senior Key Entry Operator			13,270	13,600
Junior Key Entry Operator	13,000	13,000	10,800	10,800

SOURCE: Hitchcock Publishing Company, "27th Annual DP Salary Survey," Infosystems, June 1985.

TABLE 96

AVERAGE AND MEDIAN WEEKLY SALARIES IN DATA PROCESSING BY JOB DESCRIPTION, 1985

JOB DESCRIPTION	Number Reported	Average Salary	Median Salary
Top MIS Official	177	$1,062	$996
Data Base Systems Manager	56	849	828
Manager of Data Processing	581	752	759
Asst. Manager of Data Processing	101	751	782
Project/Team Leader	278	753	757
Mgr./Supvr. of Systems Analysis & Prog.	239	751	738
Lead Systems Analyst & Programmer	264	664	667
Senior Systems Analyst & Programmer	799	646	673
Junior Systems Analyst & Programmer	464	517	528
Mgr./Supvr. of Systems Analysis	36	859	807
Lead Systems Analyst	88	710	710
Senior Systems Analyst	156	616	617
Junior Systems Analyst	67	547	563
Mgr./Supvr. of Systems Programming	76	784	778
Lead Systems Programmer	84	737	716
Senior Systems Programmer	154	627	640
Junior Systems Programmer	131	524	528
Systems Programmer Trainee	46	466	469
Mgr./Supvr. of Applications Programming	78	664	676
Lead Applications Programmer	262	606	592
Senior Applications Programmer	557	509	500
Junior Applications Programmer	555	450	423
Applications Programmer Trainee	188	344	340
Data Communications Manager	36	618	615
Data Communications Operator	70	431	386
Mgr./Supvr. of Computer Operations	301	532	525
Lead Computer Operator	373	396	376
Senior Computer Operator	670	358	346
Junior Computer Operator	584	297	288
Computer I/O Control Manager	129	372	346
Tape Librarian	57	297	296
Training Specialist	69	450	447
Key Entry Supervisor	110	375	362
Lead Key Entry Operator	212	301	300
Senior Key Entry Operator	581	271	262
Junior Key Entry Operator	235	241	240

SOURCE: Hitchcock Publishing Company, "27th Annual DP Salary Survey," Infosystems, June 1985.

TABLE 97

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND GEOGRAPHIC AREA, 1985

JOB DESCRIPTION	GEOGRAPHIC AREA									
	New England	Middle Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific	Overall
MIS Official	$1,175	$1,047	$1,093	$1,034	$940	$1,042	$1,188	$1,055	$1,035	$1,062
Data Base Systems Manager	740	962	764	805	849	882	795	772	723	849
Manager of Data Processing	815	753	720	744	758	694	806	821	760	752
Assistant Manager of Data Processing	783	684	732	785	693	744	678	729	750	751
Project/Team Leader	717	842	653	767	652	720	819	655	695	753
Manager/Supervisor of System Analysis and Programming	788	851	689	764	648	706	762	795	764	751
Lead Systems Analyst and Programmer	675	656	677	696	535	639	683	679	605	664
Senior Systems Analyst and Programmer	579	606	560	600	499	526	601	666	599	646
Junior Systems Analyst and Programmer	497	565	457	541	365	483	552	502	439	517
Manager/Supervisor of Systems Analysis	753	915	788	787	798	707	913	860	876	859
Lead Systems Analyst	691	722	730	750	700	666	631	754	743	710
Senior Systems Analyst	577	660	632	621	619	613	590	544	621	616
Junior Systems Analyst	553	503	546	561	576	534	524	529	512	547
Manager/Supervisor of Systems Programming	889	853	745	763	769	770	798	873	765	784
Lead Systems Programmer	742	765	704	730	624	664	689	767	669	737
Senior Systems Programmer	613	656	607	600	568	619	663	655	622	627
Junior Systems Programmer	509	544	560	510		465	594	524	476	524
Systems Programmer Trainee	430	500	446	502	440	326	419	487	456	466
Manager/Supervisor of Applications Programming	660	677	647	697	574	634	755	738	582	644
Lead Applications Programmer	624	640	641	647	469	552	625	658	573	606
Senior Applications Programmer	524	563	508	482	413	448	496	588	546	509
Junior Applications Programmer	421	436	430	424	320	392	476	479	413	450
Applications Programmer Trainee	333	329	357	334	300	337	355	390	380	344
Data Communications Manager	615	511	568	592	600	582	664	679	757	618
Data Communications Operator	372	422	362	478	405	400	503	449	395	431
Manager/Supervisor of Computer Operations	503	539	532	496	427	528	572	547	602	532
Lead Computer Operator	365	446	398	375	335	356	412	414	407	396
Senior Computer Operator	337	376	348	353	320	326	346	365	390	358
Junior Computer Operator	272	280	307	280	253	262	298	308	317	297
Computer I/O Control Manager	346	347	394	419	295	402	356	318	360	372
Tape Librarian	278	272	298	334	275	275	284	331	300	297
Data Entry Supervisor	407	365	380	373	361	371	363	401	415	375
User Training Specialist	360	545	433	426	425	346	402	491	516	450
Lead Data Entry Operator	294	280	311	318	297	288	298	273	334	301
Senior Data Entry Operator	281	254	307	273	223	251	248	309	311	271
Junior Data Entry Operator	222	222	264	239	165	232	242	289	280	241

NOTE: Blanks denote insufficient information.

SOURCE: Hitchcock Publishing Company, "27th Annual DP Salary Survey," Infosystems, June 1985.

TABLE 98

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND TYPE OF INDUSTRY, 1985

JOB DESCRIPTION	TYPE OF INDUSTRY												
										MANUFACTURING AND PROCESSING			
	Financial	Educational	Governmental Agencies	Hospital/ Health Care	Retail Sales & Distr.	Data Proc. Service Ctrs.	Transportation	Wholesale Sales & Distr.	Insurance	Electrical/ Electronic	Food Tobacco Drugs	Chemicals, Petro. Coal	Metal Producing & Fab.
Top MIS Official	$1,001	$869	$1,054	$1,052	$1,168	$1,050	$828	$1,053	$1,165	$1,052	$999	$1,213	$990
Data Base Systems Manager		660	874	691	807	980		835	739	892	630	795	
Manager of Data Processing	686	643	776	801	712	869	761	707	763	749	723	812	744
Asst. Manager of Data Processing	597	635	756	790	684	868	741	693	762	740			730
Project/Team Leader	631	709	718	768	655	752	757	744	787	712		772	818
Manager/Supervisor of Computer System Analysis and Programming		599	702	760	802	771	743	695	755	774	693	691	709
Lead Systems Analyst & Programmer		517	669	540	684	707	656	583	711	625	614	656	619
Senior Systems Analyst & Programmer	592	506	541	521	610	682	595	547	569	585	605	627	590
Junior Systems Analyst & Programmer		452	406	385	481	605	527	450	530	380	590	537	530
Manager/Supervisor of Systems Analysis			841					754	733	765			
Lead Systems Analyst			688	694					706	692	725		613
Senior Systems Analyst		471	569	592	566	610	616		698	590	659		604
Junior Systems Analyst	437	461	527	561		535	563		540	467			
Manager/Supervisor of Systems Programming			756		805	841	774		787	757	788	802	
Lead Systems Programmer		623	721	755	680	801	677		723	708		720	661
Senior Systems Programmer		497	608	625	593	631	544	595	685			657	580
Junior Systems Programmer		485	492	461	454	564	505	397	602	502		613	468
Programmer Trainee		307	419	408		496			384	424			
Manager/Supervisor of Applications Programming	663	561	634	680		730			757	746		605	
Lead Applications Programmer		528	603	658		660			662	624	653	533	527
Senior Applications Programmer	598	468	538	548	493	542	410	494	529	524	560	469	519
Junior Applications Programmer	374	416	423	482	356	467	339	373	482	424	426	446	385
Applications Programmer Trainee	345	308	354	403	326	299		279	353	304	332	336	360
Data Communications Manager		480	540	596		718	543		618				
Data Communications Operator	384		400	408		442	470		398	456			301
Manager/Supervisor of Computer Operations	525	457	617	498	546	556	546	494	554	594	393	625	546
Lead Computer Operator	346	350	450	441	421	417	447	357	402	413	369	396	347
Senior Computer Operator	339	338	373	393	300	353	432	313	375	392	362	342	327
Junior Computer Operator	258	284	317	335	280	263	301	259	345	268	246	299	285
Computer I/O Control Manager	298	373	407	405	336	403	476	275	327	399	230	352	341
Tape Librarian	288	285	306		318	305	368		263	334		288	
Data Training Specialist	624	448	362	456		478		524	494			359	
Key Entry Supervisor	349	281	397	307	315	382	344	358	280	376	351	358	359
Lead Key Entry Operator	265	276	314	289	279	314	314	304	253	315	326	306	289
Senior Key Entry Operator	251	265	283	277	252	237	245	259	244	270	320	287	283
Junior Key Entry Operator	206	260	267	270	227	225	240	233	232	223	252	247	251

NOTE: Blanks denote insufficient information.

SOURCE: Association of Data Processing Services Organizations and A. S. Hansen, Inc., 1985 ADAPSO Compensation Survey, January 1, 1985.

TABLE 99

MEAN AND MEDIAN ANNUAL SALARIES OF OPERATING SYSTEMS/SOFTWARE PROGRAMMER/ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	LEAD/SPECIALIST		SENIOR		INTERMEDIATE		ASSOCIATE		TRAINEE	
	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
Northeast	$45,000	$44,000	$41,900	$42,100	$30,100	$30,100	$25,000	$25,000	$18,100	$17,000
Southeast	45,300	43,600	35,500	34,800	28,600	28,300	23,200	22,500	18,600	19,400
Midwest	38,100	37,900	33,900	33,500	27,300	26,500	24,800	23,300	21,600	19,500
Southwest	42,100	42,000	35,800	35,000	30,100	29,500	24,100	23,700	24,900	24,000
NW/Rocky Mts.			35,700	35,800	27,400	28,500				
Calif./Hawaii	42,400	42,300	37,600	38,000	32,600	32,200	28,000	27,100	24,400	24,800
Overall	43,500	42,800	37,600	37,200	29,900	30,000	25,500	25,100	20,800	20,800

TABLE 100

MEAN AND MEDIAN ANNUAL SALARIES OF APPLICATIONS PROGRAMMER/ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	LEAD/SPECIALIST		SENIOR		INTERMEDIATE		ASSOCIATE		TRAINEE	
	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
Northeast	$34,400	$34,700	$29,500	$29,700	$25,700	$26,000	$22,600	$23,000	$18,700	$18,600
Southeast	38,900	37,600	32,500	32,000	27,000	26,900	21,900	21,900	17,700	17,700
Midwest	38,500	39,600	32,100	31,900	25,000	25,000	26,000	27,400	19,600	19,500
Southwest	36,800	36,300	28,500	28,500	24,400	23,700	21,200	21,200	19,100	19,200
NW/Rocky Mts.	44,800	45,400	35,300	34,700	28,400	28,700				
Calif./Hawaii	38,000	37,000	31,400	31,400	27,500	26,100	24,700	24,000	19,600	19,500
Overall	37,100	36,700	31,200	31,400	26,000	26,000	23,400	23,000	19,300	19,200

SOURCE: Association of Data Processing Services Organizations and A. S. Hansen, Inc., 1985 ADAPSO Compensation Survey, January 1, 1985.

TABLE 101

MEAN AND MEDIAN ANNUAL SALARIES AND AVERAGE TOTAL COMPENSATION* OF SOFTWARE ENGINEERS BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	LEAD/SPECIALIST			SENIOR			SOFTWARE ENGINEER		
	MEAN	MEDIAN	COMP.	MEAN	MEDIAN	COMP.	MEAN	MEDIAN	COMP.
Northeast	$46,100	$45,600	$46,300	$37,800	$37,100	$38,000	$30,000	$29,900	$30,100
Southeast	52,200	50,600	52,200	43,200	40,000	43,300	33,300	34,100	33,300
Midwest	42,900	42,200	43,200	37,300	37,100	37,400	28,900	29,000	29,000
Southwest				35,600	34,500	35,800			
Calif./Hawaii	43,400	42,800	43,400	36,600	35,300	36,600	31,400	30,000	31,400
Overall	44,800	44,700		37,300	36,600		29,100	28,500	

*Average

TABLE 102

MEAN AND MEDIAN SALARIES OF FIELD ENGINEERING REPRESENTATIVE/TELECOMMUNICATIONS ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	SENIOR		INTERMEDIATE		TRAINEE	
	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
Northeast	$32,300	$28,900	$22,300	$21,400	$19,100	$18,200
Southeast	30,400	29,700	23,200	23,400	21,400	21,300
Midwest	32,500	34,000				
Southwest	29,600	29,600				
NW/Rocky Mts.						
Calif./Hawaii	27,900	27,900				
Overall	32,300	32,600	24,000	23,400	22,400	24,100

SOURCE: Association of Data Processing Services Organizations and A. S. Hansen, Inc., 1985 ADAPSO Compensation Survey, January 1, 1985.

TABLE 103

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY JOB TITLE AND GEOGRAPHICAL AREA, JANUARY 1, 1985

JOB TITLE	GEOGRAPHICAL AREA						
	Total U.S.	Northeast	Southeast	Midwest	Southwest	Northwest & Rocky Mt. Areas	California & Hawaii
Operating Systems/Software Programming Analysis Manager	$49,800	$48,700	$52,100	$48,400	$47,000	$59,300	$50,700
Operating Systems/Software Programming/ Analysis Supervisor	43,700	40,700	44,400	41,600	38,500		46,000
Applications Programming/Analysis Manager	48,200	49,300	45,600	48,300	43,200	50,500	51,100
Applications Programming/Analysis Supervisor	40,900	40,800	40,600	40,700	37,500		42,800
Professional Services Project Manager	46,400	48,500	45,100	41,800			65,000
Computer Operations Manager	36,700	37,000	30,500	34,300	40,800	39,400	40,000
Internal MIS Manager	47,800	48,000	52,400	44,900	35,100		46,200
Production Control Manager	33,100	26,300	29,700	36,200	23,500		25,400
Product Support/Marketing Manager	45,000	46,000	46,000	43,000		43,000	46,900
Customer Support (Technical) Manager	38,500	36,600	38,700	38,000	43,800		39,400
Telecommunications Manager	44,200	41,000	46,800	47,100	44,200		46,700
Telecommunications Supervisor	37,600	34,200	34,200	40,300	33,000		42,100
Data Entry Supervisor	21,000	21,700	17,900	25,000	21,400	16,400	24,100
Data Processing Operations Supervisor	29,300	26,000	23,800	33,500	25,300		30,000
Senior Production Control Analyst	27,500	23,600		27,600			
Production Control Analyst	18,800	18,000	16,200	14,400			
Systems Consultant/Customer Support Specialist	29,900	32,900	26,000	24,600	25,000		31,000
Computer Operator - Senior	19,900	17,800	18,500	24,700	19,800	29,600	18,500
Computer Operator - Intermediate	17,100	15,000	15,100	21,000	17,000	24,400	18,100
Data Entry Operator - Senior	15,800	16,100	13,800	18,700	15,600	25,200	14,700
Data Entry Operator - Intermediate	12,900	12,300	10,700	14,500	13,000	20,100	13,700

TABLE 104

MEAN AND MEDIAN SALARIES OF CUSTOMER SUPPORT (TECH) REPRESENTATIVES BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	SENIOR		INTERMEDIATE		ASSOCIATE		TRAINEES	
	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN
Northeast	$31,000	$31,000	$26,400	$25,500	$21,600	$21,300	$18,700	$19,500
Southeast	33,500	35,900	28,400	29,800	20,900	20,000	16,600	15,000
Midwest	32,600	32,700	27,800	27,500	23,200	24,000	16,300	16,600
Southwest	36,700	40,000	32,200	32,200	21,600	22,300		
NW/Rocky Mts.	25,000	24,000	16,200	16,600				
Calif./Hawaii	34,300	33,500	28,300	25,300	20,300	19,700	16,600	16,100
Overall	32,600	32,900	27,600	26,400	21,500	21,000	17,300	17,100

SOURCE: Association of Data Processing Services Organizations and A. S. Hansen, Inc., 1985 ADAPSO Compensation Survey, January 1, 1985.

TABLE 105

MEAN AND MEDIAN SALARIES OF PROFESSIONAL SERVICES/PROJECT LEADERS BY GEOGRAPHIC AREA AND LEVEL, 1985

GEOGRAPHIC AREA	SENIOR		INTERMEDIATE	
	MEAN	MEDIAN	MEAN	MEDIAN
Northeast	$38,300	$38,200	$33,900	$33,000
Southeast	41,200	40,000	33,300	33,000
Midwest	39,400	39,000	33,600	33,300
Southwest	38,500	39,000		
Overall	41,200	40,800	34,600	34,000

SOURCE: Administrative Management Society, Data Processing Salaries Report, 1985.

TABLE 106

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY OCCUPATIONAL TITLE 1983 AND 1984

OCCUPATIONAL TITLE	1984	1983	Percent Increase
Data Base Administrator	$36,400	$35,000	4.0
Software Systems Programmer	28,200	26,700	5.6
Senior Software Systems Programmer	34,700	31,900	8.8
Manager, Software Systems Programming	40,400	38,200	5.8
Programmer	21,600	20,700	4.3
Programmer/Analyst	26,300	24,800	6.0
Systems Analyst	30,900	29,600	4.4
Project Leader	35,600	33,800	5.3
Manager, Applications Programming	40,000	38,700	3.4
Data Entry Operator (Level B)	12,800	12,300	4.1
Data Entry Operator (Level A)	13,600	13,200	3.0
Lead Data Entry Operator	16,000	15,600	2.6
Supervisory, Data Entry	20,200	19,700	2.5
Data Quality Control Clerk	14,900	14,200	4.9
Tape Librarian	15,500	14,600	6.2
Computer Operator (Level B)	15,600	14,700	6.1
Computer Operator (Level A)	17,600	16,900	4.1
Lead Computer Operator	20,900	19,400	7.7
Supervisor, Computer Operations	25,900	25,000	3.6
Manager, Computer Operations	35,400	35,000	1.1

SOURCE: Administrative Management Society, Data Processing Salaries Report, 1985.

TABLE 107

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY OCCUPATIONAL TITLE AND GEOGRAPHICAL AREA, 1984

OCCUPATIONAL TITLE	Total U.S.	GEOGRAPHICAL AREA				
		East	East Central	West Central	South	West
Data Base Administrator	$36,400	$34,000	$36,000	$34,000	$38,000	$38,000
Software Systems Programmer	28,200	28,000	28,000	28,000	28,000	30,000
Senior Software Sys. Programmer	34,700	36,000	34,000	34,000	36,000	36,000
Manager, Software Sys. Programming	40,400	40,000	43,000	38,000	40,000	38,000
Programmer	$21,500	21,500	21,500	20,500	20,500	20,500
Programmer/Analyst	25,500	26,500	26,500	24,500	25,500	26,500
Systems Analyst	30,000	32,000	32,000	30,000	30,000	30,000
Project Leader	36,000	36,000	34,000	34,000	34,000	36,000
Mgr., Applications Programming	40,000	40,000	40,000	38,000	43,000	40,000
Data Entry Operator (Level B)	12,500	13,500	11,500	11,500	11,500	12,500
Data Entry Operator (Level A)	13,500	13,500	14,500	12,500	12,500	13,500
Lead Data Entry Operator	15,500	15,500	16,500	14,500	15,500	16,500
Supervisor, Data Entry	19,500	19,500	20,500	18,500	18,500	20,500
Data Quality Control Clerk	14,500	15,500	13,500	13,500	14,500	15,500
Tape Librarian	14,500	16,500	14,500	14,500	13,500	15,500
Computer Operator (Level B)	14,500	15,500	15,500	14,500	14,500	15,500
Computer Operator (Level A)	17,500	17,500	17,500	16,500	16,500	18,500
Lead Computer Operator	19,500	20,500	21,500	18,500	18,500	19,500
Supervisor, Computer Operations	25,500	25,500	26,500	24,500	24,500	26,500
Mgr., Computer Operations	36,000	36,000	36,000	34,000	34,000	38,000

SOURCE: Administrative Management Society, Data Processing Salaries Report, 1985.

TABLE 108

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY OCCUPATIONAL TITLE AND TYPE OF BUSINESS, 1984

OCCUPATIONAL TITLE	TYPE OF BUSINESS					
	Mfg./ Proces-sing	Banking/ Insur./ Finance	Retail/ Wholesale Sales/Dist.	Utili-ties	Data Proc. Serv.Bur.	All Other
Data Base Administrator	$36,000	$40,000	$38,000	$43,000	$38,000	$34,000
Software Systems Programmer	28,000	28,000	32,000	32,000	28,000	28,000
Senior Software Sys. Programmer	38,000	34,000	36,000	38,000	36,000	34,000
Manager, Software Sys. Programming	43,000	43,000	38,000	43,000	43,000	38,000
Programmer	22,500	20,500	22,500	25,500	20,500	20,500
Programmer/Analyst	28,000	24,500	28,000	28,000	26,500	25,500
Systems Analyst	32,000	30,000	34,000	32,000	34,000	28,000
Project Leader	36,000	36,000	36,000	38,000	34,000	34,000
Mgr., Applications Programming	43,000	43,000	40,000	47,500	43,000	36,000
Data Entry Operator (Level B)	12,500	11,500	9,500	15,500	11,500	13,500
Data Entry Operator (Level A)	14,500	12,500	13,500	18,500	12,500	12,500
Lead Data Entry Operator	15,500	15,500	15,500	16,500	14,500	14,500
Supervisor, Data Entry	20,500	18,500	19,500	28,000	18,500	18,500
Data Quality Control Clerk	16,500	12,500	13,500	21,500	12,500	14,500
Tape Librarian	19,500	13,500	14,500	16,500	11,500	14,500
Computer Operator (Level B)	15,500	14,500	14,500	17,500	13,500	15,500
Computer Operator (Level A)	17,500	16,500	16,500	21,500	15,500	17,500
Lead Computer Operator	21,500	19,500	18,500	24,500	17,500	18,500
Supervisor, Computer Operations	28,000	24,500	24,500	32,000	22,500	24,500
Mgr., Computer Operations	38,000	36,000	36,000	43,000	32,000	32,000

SOURCE: Source EDP, 1985 Computer Salary Survey and Career Planning Guide.

TABLE 109

MEDIAN SALARIES OF NON-MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND LENGTH OF EXPERIENCE, 1985

NON-MANAGEMENT POSITIONS	LENGTH OF EXPERIENCE					
	1 Year-2 Years	2 Years-4 Years	2 Years-5 Years	4 Years-7 Years	Over 5 Years	Over 7 Years
Commercial Programmers and Programmer Analysts	$25,600	$	$30,500	$	$35,500	$
Scientific/Engineering Programmers & Programmer Analysts	26,000		31,900		37,900	
Microcomputer Programmers & Programmer Analysts	27,800		32,400		39,000	
Minicomputer Programmers & Programmer Analysts	28,100		32,500		38,000	
Software Engineers	30,300	35,000		40,300		41,600
Office Automation Analysts	28,200		33,200		41,200	
Computer Operators	17,800		20,500			25,800
Systems (Software) Programmers	30,600	35,500		43,000		44,400
Data Base Administrators/Specialists	29,300	37,400		43,900		45,300
Data Communications Programmers & Programmer Analysts	30,600		36,200		43,100	
Technical Writers and Editors	25,400	30,400		34,200		34,900
EDP Auditors	26,600	33,700		41,900		43,900
Senior Analysts, Project Leaders & Consultants		34,400		39,100		44,200

SOURCE: Source EDP, 1985 Computer Salary Survey and Career Planning Guide.

TABLE 110

MEDIAN COMPENSATION OF MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND SIZE OF COMPUTER SYSTEM, 1985

MANAGEMENT POSITION	SIZE OF COMPUTER SYSTEM		
	SMALL	MEDIUM	LARGE
Technical Services Managers	$43,700	$49,300	$57,200
Systems & Programming Managers	43,700	50,000	55,700
Operations Managers	31,700	39,300	46,100
Computing Systems Directors	44,100	56,900	71,500

SOURCE: U. S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratoraies, September 1985.

TABLE 111

AVERAGE ANNUAL SALARIES OF SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES, 1980 AND 1985

POSITION CLASSIFICATION	AVERAGE ANNUAL SALARIES		% Increase
	1980	1985	1980-85
Lab Aide I	$ 8,187	$11,081	35.4
Lab Aide II	9,092	12,411	36.5
Lab Technician I	10,203	14,238	39.6
Lab Technician II	11,743	16,053	36.7
Microbiologist I	13,582	18,339	35.0
Microbiologist II	15,490	21,019	35.7
Microbiologist III	17,977	24,060	33.8
Microbiologist IV	20,876	27,541	31.9
Microbiologist V	22,723	31,326	37.9
Chemist I	13,662	18,463	35.1
Chemist II	15,984	21,301	33.3
Chemist III	17,906	24,920	39.2
Chemist IV	20,826	27,215	30.7
Chemist V	23,344	32,210	38.0
Asst. Lab. Director	24,932	33,292	33.5
Lab. Director	30,882	42,133	36.4

SOURCE: U. S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, September 1985

TABLE 112

AVERAGE ANNUAL SALARIES FOR SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES BY STATE, 1985

STATE	POSITION					
	Laboratory Aide I	Laboratory Technician I	Micro-Biologist I	Chemist I	Asst. Lab. Director	Lab. Director
Alabama	$	$14,854	$21,380	$	$38,597	$50,661
Alaska		19,152	31,878			60,060
Arizona		14,842		19,466		42,519
Arkansas	9,898	11,406	14,482	14,482	27,248	28,821
California	14,754	18,624	17,874	21,768	43,686	59,604
Colorado	11,820	15,840	20,760	26,502		51,048
Connecticut	13,359	15,457	17,563	17,563	43,609	53,059
Delaware	9,821	10,861	17,604	19,063		44,192
D. C.	10,271	15,263	19,554	17,655	41,062	48,817
Florida	8,227	11,390	15,013	15,921	28,104	31,500
Georgia	10,905	14,307	18,087	18,087	35,520	60,840
Hawaii	13,506	15,426				37,092
Idaho	11,379	13,164	17,643	17,643		42,490
Illinois	12,972	14,346	17,916	18,636		40,380
Indiana	11,713	13,234	18,447	18,447		47,242
Iowa	9,914	13,516	18,570	18,570	44,385	43,540
Kansas		11,850	20,760	20,760		47,982
Kentucky	9,906	13,272	19,608	19,608		71,900
Louisiana	9,822	12,312	18,276	18,276	26,658	43,608
Maine	11,720	13,488	17,087	17,805	28,434	30,815
Maryland		11,235	15,559	15,559	35,344	48,800
Massachusetts	11,995	16,329	22,396	22,396	38,807	41,824
Michigan		18,755	19,326	19,326	51,390	55,358
Minnesota	14,034	16,578			39,306	46,792
Mississippi	8,734		16,530	18,273	27,634	32,090
Missouri	9,876	13,554	17,124	17,124	28,686	34,284
Montana	12,525	15,494	17,980	17,980		29,610
Nebraska		13,254	19,028	19,028		33,938
Nevada	13,245	16,542				
New Hampshire	9,847	13,396	15,337		22,844	26,744
New Jersey	9,645	14,249	16,343	16,343		45,094
New Mexico	10,680		18,282	18,282	34,470	36,552
New York						
North Carolina	12,150	15,780	19,698	18,852	36,174	45,876
North Dakota	8,652	11,046	18,930	18,930	29,358	33,984
Ohio	12,532	14,269	17,222	17,222	30,160	33,186
Oklahoma	10,125	14,247	22,641			43,760
Oregon	11,544	15,138			27,462	36,864
Pennsylvania	11,922	14,718	20,371	20,371	34,396	40,860
Rhode Island	12,763	15,194	17,857	18,471	32,939	40,319
South Carolina	10,326	13,119	17,882	19,343	29,779	62,727
South Dakota	8,861	12,012	16,608	16,608		30,742
Tennessee	9,714	10,674	16,830	16,794		38,826
Texas	12,000	15,390	19,926	19,926	44,796	47,112
Utah	13,154	16,589	20,504	20,070		46,134
Vermont		13,800	16,692	16,692	26,780	35,776
Virginia	8,826	10,543	18,002	19,674	28,108	33,589
Washington	11,904	16,824	19,512	21,534		43,002
West Virginia	11,250		19,212	19,212	26,592	40,632
Wisconsin	14,701	14,386	19,411	19,411		54,500
Wyoming	13,056	18,324			32,904	43,110
Guam	9,322	10,528	14,840	14,840	19,910	22,640
Puerto Rico	5,484		9,180	9,420		21,360
Virgin Islands	7,003	9,847	11,137			21,569

NOTE: Blanks indicate no position reported.

SOURCE: Abbott, Langer and Associates, Compensation in the Accounting/Financial Field, 1985.

TABLE 113

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL BY TYPE OF ORGANIZATION AND POSITION, OCTOBER 1984

TYPE OF ORGANIZATION	Non-Supervisory Accountants & Auditors		Chief Financial Officers		Comptrollers		Accounting Auditing Managers		Supervisory Accountants & Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
All Manufacturing/Extractive Organizations	$24,677	$23,880	$68,440	$60,788	$51,688	$47,400	$39,190	$37,300	$29,982	$30,540
All Non-Manufacturing Organizations (Excluding Public Acct.)	25,355	23,532	64,438	60,000	51,536	49,000	38,051	36,000	25,355	23,532
Accounting Firms (Public)	19,471	18,450					35,472	36,200	25,942	26,000
Aerospace/Aircraft Product Mfg.	23,731	20,259	76,858	74,490	47,604	50,000	40,342	39,296	27,505	30,589
Apparel/Textile Product Mfg.	23,107	22,260	63,000	75,000	49,536	48,740	35,823	33,720	28,255	29,000
Banks and Other Financial Organizations	21,354	20,700	83,735	93,500	54,369	48,712	35,623	33,420	25,946	24,440
Chemical/Pharmaceutical/Plastic/ Rubber Product Mfg.	24,893	25,000	74,453	65,860	49,891	44,220	40,044	38,820	27,212	25,780
Construction & Engineering Firms	23,373	22,200			48,782	48,000	37,294	36,000	27,169	27,300
Educational Institutions	21,064	21,565	49,397	50,000			30,151	31,100	22,536	23,570
Electrical/Electronics Product Mfg.	25,348	24,668	74,567	66,000	48,655	47,000	39,068	38,850	28,958	28,860
Fabricated Metal Product Mfg.	24,587	22,750	66,872	60,000	52,063	49,750	35,651	33,500	26,881	26,225
Food/Beverage/Tobacco Product Mfg.	25,127	22,984	65,494	54,939	48,075	43,160	32,050	29,550	29,102	30,000
Governmental Organizations	18,042	17,732					30,186	27,060	24,052	21,683
Health Services (Hospitals/ Nursing Homes/etc.)	22,672	22,500							22,700	22,000
Merchandising Firms (Retail & Wholesale)	20,331	20,800	51,404	50,000	41,112	41,000	30,357	32,000	22,486	21,750
Petroleum/Natural Gas - Extracting/Refining	24,379	23,500					46,468	46,070	33,527	33,900
Utilities	29,228	28,260					50,258	53,388	38,283	36,900

SOURCE: Abbott, Langer and Associates, Compensation in the Accounting/Financial Field, 1985.

TABLE 114

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL BY GEOGRAPHIC AREA AND POSITION, OCTOBER, 1984

GEOGRAPHIC AREA	Non-Supervisory Accountants & Auditors		Chief, Financial Officers		Comptrollers		Accounting Auditing Managers		Supervisory Accountants & Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Boston & Vicinity	$21,119	$19,200					$36,565	$35,500	$25,750	$26,000
New York City & Vicinity	22,788	20,000	$90,243	$79,474	$59,554	$50,000	43,486	42,000	28,217	28,500
Philadelphia & Vicinity	21,460	21,170	73,816	66,300	48,811	53,500	37,168	38,000	27,533	26,000
Northeastern States (excluding metro areas surveyed	22,833	22,290	56,306	50,000	54,056	45,270	39,041	37,660	31,234	31,200
Northeastern States (including metro areas surveyed)	22,453	21,600	70,526	66,420	55,096	49,150	39,362	37,730	29,526	29,000
Washington, D.C. & Vicinity	22,522	21,800	61,786	60,000			31,909	31,200	19,092	18,375
Southern States (excluding Washington, D.C. area)	25,533	24,305	72,789	73,750	47,430	44,100	40,975	37,800	30,638	29,460
Southern States (including Washington, D.C. area)	25,398	24,000	70,304	65,000	47,775	44,220	40,205	36,930	30,075	28,440
Chicago & Vicinity	25,326	22,890	63,573	59,592	60,617	49,700	38,367	36,950	30,926	30,050
Midwestern States (excluding Chicago area)	21,969	20,150	62,746	60,000	51,114	49,000	35,223	35,200	26,557	26,150
Midwestern States (including Chicago area)	22,814	21,300	63,009	60,000	53,307	49,100	36,243	35,500	27,732	27,300
Dallas/Ft. Worth & Vicinity	28,490	27,465					37,174	34,000	28,255	31,086
Southwestern States (excluding Dallas/Ft. Worth area)	25,004	24,240	54,742	58,877	58,298	51,000	40,359	35,500	33,346	35,496
Southwestern States (including Dallas/Ft Worth area)	25,405	24,960	52,949	55,000	57,880	51,000	39,434	35,000	32,583	33,430
North Central States	21,032	20,300	73,810	60,000	47,305	45,111	34,066	32,750	25,666	23,932
Mountain States	32,943	32,750	53,757	49,900	44,917	37,500	44,009	44,000	39,337	37,800
Los Angeles & Vicinity	22,503	20,858	71,222	61,688	53,771	50,000	37,993	36,900	28,699	28,800
San Francisco & Vicinity	21,875	19,930			49,302	50,000	35,195	32,750	26,153	27,600
Pacific States (excluding metro areas surveyed)	23,484	23,500	67,012	50,000	47,689	46,842	39,708	39,546	28,748	30,998
Pacific States (including metro areas surveyed)	22,756	21,800	69,966	60,375	50,543	50,000	37,948	36,950	28,381	28,800
All Areas	**24,145**	**22,800**	**66,817**	**60,770**	**51,635**	**48,000**	**38,363**	**36,600**	**29,590**	**28,800**

SOURCE: Abbott, Langer and Associates, Compensation in the Accounting/Financial Field, 1985.

TABLE 115

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL BY LEVEL OF EDUCATION AND POSITION, OCTOBER 1984

LEVEL OF EDUCATION	Non-Supervisory Accountants & Auditors		Chief, Financial Officers		Comptrollers		Accounting Auditing Managers		Supervisory Accountants & Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Less than BA/BS/BBA	$22,402	$21,320	$50,325	$49,400	$43,441	$36,200	$32,075	$31,512	$26,423	$25,770
BA/BS/BBA Degree	23,725	22,380	68,372	61,800	47,508	46,935	38,332	36,500	30,035	29,000
MA/MS Degree	33,105	34,500	71,264	63,385	69,884	67,000	45,277	41,000	35,446	34,750
MBA Degree	28,193	26,400	66,297	63,500	58,193	50,400	41,941	41,940	35,275	35,760

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, "Weekly Earnings of Wage & Salary Workers First Quarter 1985."

TABLE 116

NUMBER AND MEDIAN WEEKLY EARNINGS BY SEX FOR SELECTED OCCUPATIONS, FIRST QUARTER 1985

OCCUPATION	TOTAL		MEN		WOMEN	
	Number of Workers	Median Weekly Earnings	Number of Workers	Median Weekly Earnings	Number of Workers	Median Weekly Earnings
MANAGERIAL & PROFESSIONAL	18,799,000	$483	10,841,000	$578	7,958,000	$384
Executive, Administrative & Managerial	9,025,000	502	7,799,000	601	3,226,000	363
Professional	9,774,000	462	5,042,000	554	4,732,000	400
TECHNICAL, SALES & ADMINIS. SUPPORT	22,865,000	303	8,545,000	419	14,320,000	260
Technicians & Related Support	2,755,000	404	1,532,000	486	1,223,000	326
Sales Occupations	6,948,000	322	4,042,000	421	2,907,000	217
Administrative Support, Including Clerical	13,161,000	282	2,970,000	400	10,190,000	263

SALARIES OF ENGINEERS

In a 1984 survey of compensation and benefits in the high technology industry, **The Hay Group and Syscon Corporation** found median compensation ranging from a high of $111,300 for executive vice presidents to $31,400 for engineers. Senior engineers reported median compensation of $40,900 while senior programmers earned $30,200 (Table 117).

Engineers' salaries increased 5.7% from 1983 to 1984, according to the 18th survey by the **Engineering Manpower Commission** of the **American Association of Engineering Societies.** Salaries paid to newly employed engineers with less than one year of experience increased 5.2%. The more than 650 organizations that participated in the 1984 salary survey reported salaries of approximately 93,000 engineers. Chart 4 shows 1984 median salaries of engineers by degree level and years since baccalaureate degree.

Engineers employed in supervisory positions command higher salaries than non-supervisors. However, the salary differential between supervisory and non-supervisory status is not constant across employment groups. The largest differential occurs in the petroleum industry, where the spread ratio is 65% and the smallest differences are found in the mining industry (14%) and state governments (26%) (Table 118). Regardless of supervisory status, engineers employed by petroleum companies earned the highest median and average slaries in 1984, while those engineers employed in state governments earned the least (Table 119).

Engineers' salaries are not uniform throughout the U.S. Engineers working in the West South Central reported the highest salaries while those working in the South Atlantic and East North Central reported the lowest (Tables 120 and 123).

By type of industry, engineers working in the petroleum industry command the highest salaries throughout their working career. As would be expected, experience affects salaries as shown in Table 121. By type of employer, those engineers working in research laboratories report the highest median salaries throughout their working careers followed closely by those employed in industry and by engineering services firms. As was true in previous years, engineers working in state government earn the least (Table 122).

As expected, those engineers possessing a higher degree earn higher salaries. Median salaries paid to holders of Ph.D.s were 11.2% higher than those paid to master's degree holders while the median salary paid to master's degree engineers was 16.1% higher than that paid to bachelor's degree engineers (Table 124).

The nineteenth national compensation survey by the **National Society of Professional Engineers - PROFESSIONAL ENGINEER INCOME AND SALARY SURVEY 1985** found that the median income of NSPE members reached $45,760 in January 1985, up 6.4% over the 1984 median and the third year in succession that engineers' salaries outgained the CPI which increased 3.6% over the same period.

By level of education, those engineers holding doctorates had a median income of $55,435 (up 5.4% over 1984), while those with a M.S. in engineering reported a median income of $47,000 (up 4.4%), and those with the B.S. in engineering $44,180 (up 5.8%) (Table 125). Regardless of degree level, median income increases with engineering experience as shown in Table 127.

Petroleum and mining engineers continue to earn the highest median, $57,000, followed by chemical engineers at $49,200. Civil engineers engaged primarily in surveying had the lowest median income - $39,817 (Table 126). Median income of engineers by length of experience is shown in Table 127 through 129.

As in previous surveys, engineers in executive/administrative positions were the highest-paid respondents reporting a median income of $57,000, followed by those in sales-marketing and R & D, both with median incomes of $46,000 Those engineers working in the design field fared least well reporting a median income of $39,136 (Table 131). Regardless of years of experience, those engineers working in executive/administrative positions report the highest median incomes (Table 128).

Engineers employed by petroleum and coal products producers reported the highest median income - $54,000, followed by those employed by pipeline utilities ($52,000) and research organizations and laboratories ($50,400). The lowest median incomes were received by engineers employed by state and local governments and by the federal government ($37,826, $39,326, and $45,548 respectively) (Table 130).

Geographically, those engineers employed in the Northeastern states and the Pacific and Western states reported the highest median incomes - $48,000. The lowest median incomes were reported by those engineers working in the Great Plains states - $42,100 (Table 132). By metropolitan area, the highest median incomes were found in San Francisco/Oakland ($54,156), Houston ($54,000, and New York City ($53,060). The lowest median incomes were found in Cincinnati ($41,536), St. Louis ($43,680) and Kansas City ($43,950) (Table 133).

Salaries for engineers in high-tech firms continued to increase across the board during 1984, according to. **Engineering Career Associates Personnel Services.** The **1985 HIGH TECH ENGINEERING SALARY SURVEY ...**, based on an analysis of the incomes of more than 25,000 engineering professionals that Engineering Career Associates Personnel Services worked with during 1984, finds that those engineers working in design and development commanded higher salaries than did those working in manufacturing, testing or quality control (Table 134). Those engineers employed in sales/marketing in high tech firms received compensation ranging from $34,000 for field engineers to $86,000 for the director of sales/marketing or vice president (Table 135).

Engineering compensation increased an average 4.2% in base salary and 4.3% in total cash compensation from 1983 to 1984, according to survey participants in the **1984 HAY ENGINEERING COMPENSATION COMPARISON** conducted by **The Hay Group.**

Those journeyman engineers working in facility design and construction were the highest paid ($47,300), 7.2% above the all journeyman engineer average. Entry level engineers also reported the highest compensation working in facility design and construction ($35,100). Engineering supervisors reported the highest annual compensation working in basic research - $47,900. Engineering managers who work in process development were the highest paid managers, $68,400, 17.0% above the survey average Table 136.

Journeyman engineers who are civil engineers receive the highest annual compensation ($37,800) while entry level engineers who are aerospace engineers recieve the highest ($29,200). Both engineering supervisors and engineering managers who are chemical engineers were paid the highest annual compensation among the disciplines (Table 137).

The chemical/petroleum industry paid their journeyman engineers the highest total annual compensation - $37,700 - 3.4% above the survey average. Entry level engineers and engineering supervisors also reported the highest annual compensation working in the chemical/petroleum industry ($30,600 and $51,500 respectively). The consumer industry paid their managerial engineers the highest compensation ($73,100), 16.8% more than the overall survey average for managerial engineers. (Table 138).

Those journeyman engineers working in the Southwest were paid the highest ($38,500), 5.6% above the survey average, while entry level engineers working in the West were paid the most ($32,600). Both engineering supervisors and engineering managers working in the Southwest earned the most - $54,100 and $68,700 respectively (Table 139).

Average compensation for industrial engineers on January 1, 1985 was $41,920 according to the ninth survey conducted by **Abbott, Langer and Associates** for the **American Institute of Industrial Engineers.** However, median income varied considerably from one employer to another. Median incomes in non-manufacturing organizations were considerably higher ($40,500) than in manufacturing firms ($37,000). The lowest median incomes were found in firms manufacturing furniture and wood products ($33,620) and textile mill products ($34,250) while the median incomes were highest for those industrial engineers employed by non-engineering consulting firms ($48,000) and petroleum and coal products producers ($46,716) (Table 140).

Median income of industrial engineers was marginally higher in the Houston metropolitan area ($43,200), followed closely by New York City and vicinity ($42,800 and the San Francisco/Oakland Metropolitan area ($42,088). Median incomes were lowest in Minneapolis/St. Paul ($36,442), Dallas/Fort Worth ($37,475) and Boston ($37,500) (Table 141).

The median income of IIE engineers varied according to degree level. Those with less than a bachelor's degree had a median income of $33,000, while those with bachelor's degrees in engineering or non-engineering fields had median annual incomes of $35,100 and $36,000. Ph.D.s had the highest median income - $48,100 (Table 142).

The total income of industrial engineers rose fairly regularly by length of experience, with a median income of $26,400 for those with under one year of experience and $46,000 for those with 25 years of experience and over (Table 143). As expected, the median income was highest for IEE members who were corporate officers or in general management ($58,500). Educators had a median income of $42,000, while engineers, analysts or other professionals had the lowest median income of $32,500 (Table 144).

By primary activity or specialty, the highest median income went to those engaged in organization administration at $43,946. At the low end of the spectrum were those engaged in work measurement, standards and performance measures at $32,000 (Table 145).

In another survey by **Abbott, Langer and Associates** on **COMPENSATION IN MANUFACTURING (ENGINEERS AND MANAGERS)**, prepared for the **Society of Manufacturing Engineers**, engineers reported a median annual income of $32,000 in 1984, up 8.8% from 1982. Managerial personnel in manufacturing reported a median income of $42,960, up 11.9% in the same period. Naturally, length of experience played a significant part in determing income. Total median compensation for engineers ranged from $27,500 for those with less than five years of experience to $37,500 for those with 30 years or more of experience (Table 146).

Engineers working in manfuacturing who majored in mechanical engineering reported the highest median salary $32,464, while those who majored in industrial engineering reported the lowest, $30,000 (Table 147).

By type of employer, engineers employed by non-manufacturing firms recorded the highest median total compensation ($34,838), followed closely by those in aerospace/aircraft manufacturing firms ($34,736). Engineers employed by manufacturers of instruments, controls and related products earned the least ($29,850) (Table 148).

Level of education had a greater effect upon the income of managers (Table 151) than on the income of engineers (Table 149). The lowest median income of managers by level of education was $36,400 for those who held an engineering technican (two-year) degree, increasing to $50,000 for those who hold a graduate degree - a difference of 37.4%. For engineers, income rose from $29,943 for those who held an engineering technician degree to $36,000 for those who held a graduate degree - a difference of 20.2%.

Engineers reported the highest median income in San Francisco/Oakland ($40,000), followed by Houston ($36,744) and Detroit ($34,870). The lowest median compensation for engineers was found in St. Louis ($29,850) and Philadelphia ($30,000) (Table 150).

The median annual income of engineers who are members of the **Institute of Electrical and Electronics Engineers** was $46,100 as of February 1, 1985, according to the 1985 **IEEE U.S. MEMBERSHIP SALARY AND FRINGE BENEFIT SURVEY** under the supervison of **Abbott, Langer and Associates.** This represents an increase of 15.3% since the preceding survey in 1983, compared to an increase in the Consumer Price Index of 7.8%. By level of education, median income was highest for those with doctoral degrees ($56,469). The lowest median income ($31,776) went to those with a bachelors in educational technology or Bachelors of Science in Educational Technology, even though this category was not the lowest level of formal education (Table 152).

Income showed a high correlation with increased length of engineering experience. The median income for those working in their areas of primary technical competence increased from $28,000 for those with one year of experience to $56,000 for those with 30 years of experience or more (Table 153). The same high correlation of income with increasing age is evident. IEEE engineers employed in their areas of primary technical competence who are under 25 years of age reported a median income of $28,300 compared to $54,588 for those who are 65 years or older (Table 154).

Not surpringly, male IEEE engineers reported median incomes considerably higher than did female members - $47,500 compared to $32,450. Of the three ethnic groups of Black, Hispanic and Asian/Pacific Islander, the highest median income was reported by Asian Pacific Islanders ($45,000) (Table 155).

Median income increased regularly with increased professional responsibility, from $27,500 for a beginning engineer (Engineer 1) to $68,000 for Engineer 8 (Table 156).

Median income varied widely by industry or service of employer, from $53,400 in television broadcasting and $53,000 in petroleum and related products down to $35,758 in motor vehicle manufacturing (Table 157).

Median income by primary technical competence was highest ($59,525) for those in engineering management, followed by those in electron devices ($53,400) and lowest in computer maintenance ($35,672) (Table 158).

San Francisco/Oakland & Vicinity reported the highest median income for IEEE engineers who worked there ($53,000), followed by New York City & vicinity ($51,461). The lowest median income ($41,784) was found in the southwestern states, excluding Houston-Dallas and vicinity (Table 159).

Median income by principal job function was highest for those in general and corporate management ($68,700) and consulting ($52,780). Lowest median incomes went to those in engineering support ($24,660) and computer systems operations ($40,336) (Table 160).

SOURCE: Syscon Corporation and The Hay Group, High Technology Industry 1984 Survey of Compensation and Benefits

TABLE 117

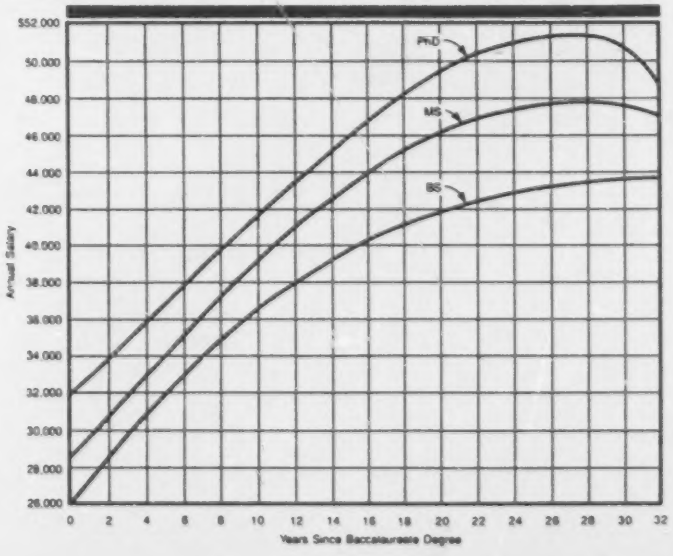
NUMBER, MEDIAN AND AVERAGE COMPENSATION IN THE HIGH TECHNOLOGY INDUSTRY BY POSITION TITLE, 1984

POSITION TITLE	MEDIAN	AVERAGE	NUMBER
Chairman, President Chief Executive Officer	$110,050	$186,450	20
Executive Vice President	111,300	145,689	19
Head of Administration	55,800	81,191	12
Head of Major Operating Unit	101,200	109,224	54
Division Manager	70,150	70,561	160
Project Manager	41,900	46,284	542
Senior Systems Analyst	41,800	40,493	646
Systems Analyst	33,900	32,589	890
Senior Programmer	30,200	32,082	508
Programmer	25,600	27,333	716
Senior Engineer	40,900	39,558	1,030
Engineer	31,400	30,173	797

SOURCE: Engineering Manpower Commission of American Assocation of Engineering Societies, Engineering Manpower Bulletin, Number 74, November 1984

CHART 4

MEDIAN ANNUAL SALARIES OF ENGINEERS BY DEGREE LEVEL AND YEARS SINCE BACCALAUREATE, 1984



SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 74, November 1984.

TABLE 118

MEDIAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SUPERVISORY STATUS, 1984

EMPLOYMENT GROUP	Supervisor	Non-Supervisor	Percent Differential
Research and Development	$52,400	$40,950	28
Petroleum	61,850	37,600	65
Aerospace	47,900	35,250	36
Chemical	47,800	36,400	31
Electric Equipment	43,950	32,200	37
Electronic Equipment	48,100	33,100	45
Local Government	41,900	32,600	29
State Government	32,600	25,950	26
Federal Government	36,950	27,700	33
Construction	40,150	29,750	35
Mining	43,700	38,400	14
Utilities	47,400	34,550	37
Design, Consulting and Engineering Services	49,550	35,400	40
Mechanical Industry	41,650	30,150	38
Metal Industries	44,550	32,100	39
Computer	50,800	35,600	43
Overall	46,900	34,100	38

SOURCE Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 70, January 1984, and No. 74, November 1984.

TABLE 119

MEDIAN AND MEAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP, 1983 AND 1984

EMPLOYMENT GROUP	MEDIAN		MEAN	
	1984	1983	1984	1983
Research and Development	$44,700	$42,250	$45,200	$43,250
Petroleum	44,850	44,650	50,350	49,350
Aerospace	38,900	36,900	39,650	37,750
Chemical	39,750	37,350	42,200	40,150
Electric Equipment	35,050	34,400	37,150	36,300
Electronic Equipment	36,250	33,300	38,750	35,500
Local Government	37,400	32,250	37,750	33,600
State Government	30,500	28,750	30,700	29,450
Federal Government	29,900	38,150	31,800	39,400
Construction	38,000	37,200	42,850	41,200
Mining	41,650	38,850	46,900	42,550
Design, Consulting & Engineering	38,550	36,800	40,250	38,400
Mechanical Industry	34,300	34,900	35,800	37,000
Metal Industries	35,950	32,700	38,450	34,700
Computer	39,650		40,500	

TABLE 120

MEDIAN AND MEAN SALARIES OF ENGINEERS* BY GEOGRAPHICAL REGION, 1983 AND 1984

GEOGRAPHICAL REGION	MEDIAN		MEAN	
	1984	1983	1984	1983
Pacific	$40,600	$41,650	$41,650	42,350
Middle Atlantic	39,300	37,200	40,750	39,400
Mountain	37,450	42,150	39,150	42,500
New England	40,150	35,050	42,150	37,050
East North Central	36,900	34,650	39,150	37,050
West North Central	37,000	33,500	39,000	35,350
East South Central	39,450	36,000	41,000	37,750
West South Central	41,350	37,950	44,950	41,100
South Atlantic	36,900	33,750	39,200	35,900

*Includes only engineers employed in industry or government.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineer's Salaries: Special Industry Report 1984

TABLE 121

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF INDUSTRY AND SELECTED YEARS SINCE BACCALAUREATE, 1984

TYPE OF INDUSTRY	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
Aerospace	(327) $25,750	(570) $26,800	(244) $31,100	(152) $33,300	(655) $36,550	(608) $41,950	(583) $43,800	(766) $44,900	(623) $45,000	(1,080) $41,100
Chemicals	(222) 28,450	(184) 29,200	(321) 32,500	(597) 34,200	(1,843) 36,800	(1,873) 41,950	(1,152) 44,250	(663) 46,250	(376) 48,800	(1,844) 46,900
Construction	(3)	(36) 23,800	(88) 31,150	(94) 35,400	(102) 42,400	(74) 55,750	(59) 60,400	(7) 62,850	(3)	(20) 53,650
Electric & Electronic Equipment	(426) 27,700	(555) 28,850	(499) 33,600	(380) 35,900	(951) 39,000	(1,072) 43,800	(1,053) 45,300	(1,044) 46,250	(1,081) 47,000	(1,329) 46,650
Computer	(15) 25,250	(19) 26,850	(26) 33,250	(15) 36,150	(40) 39,750	(34) 43,900	(49) 44,650	(39) 44,850	(30) 44,550	(31) 44,000
Electronic Equipment	(558) 26,200	(688) 27,650	(584) 33,000	(537) 35,200	(1,428) 37,950	(905) 41,400	(932) 42,400	(833) 43,050	(576) 43,650	(1,048) 43,850
Electrical Machinery and Equipment	(33) 25,050	(22) 26,050	(19) 30,000	(28) 31,800	(51) 34,250	(46) 38,050	(46) 39,350	(41) 40,350	(37) 41,650	(67) 42,350
Mechanical	(12) 23,250	(38) 24,250	(53) 28,200	(57) 30,100	(146) 32,700	(95) 36,950	(99) 38,450	(86) 39,650	(67) 41,150	(97) 42,050
All Metals	(89) 27,450	(76) 28,050	(106) 30,550	(147) 31,800	(409) 33,700	(204) 37,500	(246) 39,250	(111) 40,800	(119) 43,250	(300) 44,000
Metal Products Fabricated	(89) 27,450	(76) 28,050	(106) 30,500	(145) 31,800	(409) 33,700	(201) 37,500	(245) 39,250	(108) 40,800	(117) 43,250	(295) 44,100
Auto and Railroad Equipment	(2)	(5) 26,400	(12) 35,500	(11) 38,050	(22) 40,150	(29) 41,500	(26) 41,700	(11) 41,800	(13) 41,800	(34) 41,800
Paper Products	(40) 27,000	(50) 28,550	(53) 34,250	(41) 36,550	(166) 39,100	(104) 41,400	(179) 41,550	(177) 41,450	(66) 40,900	(238) 40,400
Petroleum	(23) 31,500	(108) 33,500	(67) 41,800	(46) 46,000	(87) 51,950	(64) 61,950	(29) 65,700	(34) 68,600	(30) 72,150	(69) 73,900
Mining	(16) 32,600	(19) 33,050	(21) 35,300	(17) 36,550	(56) 38,650	(46) 43,750	(49) 46,800	(24) 50,150	(25) 57,900	(39) 72,750
Design, Consulting & Engineering Services	(281) 25,750	(345) 27,000	(402) 32,050	(359) 34,550	(1,366) 38,150	(920) 43,850	(668) 45,750	(563) 46,900	(357) 47,650	(788) 46,800
Electric Utilities	(441) 26,850	(830) 28,250	(639) 33,700	(529) 36,200	(2,082) 39,600	(943) 44,700	(783) 46,450	(610) 47,700	(357) 49,200	(986) 49,900
Gas Utilities & Pipelines	(29) 28,050	(42) 29,300	(43) 34,400	(41) 37,050	(104) 40,900	(64) 47,500	(41) 49,950	(39) 51,700	(37) 53,200	(106) 52,350
Lumber and Wood Products	(3)	(6) 24,750	(7) 30,550	(25) 33,800	(53) 38,950	(25) 48,500	(13) 51,950	(6) 53,900	(2)	(3)
Machinery, Non-Electrical	(9) 23,000	(34) 23,950	(48) 27,850	(53) 29,750	(142) 32,400	(92) 36,750	(97) 38,400	(78) 39,650	(65) 41,300	(85) 42,350
Shipbuilding	(48) 25,600	(49) 26,150	(23) 28,600	(12) 29,850	(183) 31,700	(179) 35,450	(41) 37,250	(315) 38,950	(28) 42,050	(186) 45,950
Food Products	(16) 25,400	(11) 26,450	(10) 30,600	(7) 32,600	(22) 35,400	(16) 39,900	(11) 41,650	(12) 43,000	(16) 44,800	(36) 45,950

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineer's Salaries: Special Industry Report 1984, Professional Income of Engineers 1984, and Salaries of Engineers in Education, 1984.

TABLE 122

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SELECTED YEARS SINCE BACCALAUREATE, 1984

EMPLOYMENT GROUP	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
All Industry	(2,471)	(3,349)	(3,271)	(3,259)	(10,359)	(7,646)	(6,439)	(5,456)	(3,858)	(8,400)
	$26,350	$27,600	$32,500	$34,850	$37,950	$42,450	$43,900	$44,900	$45,900	$46,300
All Mfg. Industries	(1,408)	(1,835)	(1,566)	(1,738)	(5,253)	(4,274)	(3,535)	(2,932)	(2,066	(5,150)
	26,400	27,600	32,250	34,400	37,200	41,400	42,850	43,900	45,100	45,600
All Non-Mfg. Industries	(922)	(1,389)	(1,425)	(1,289)	(4,656)	(2,945)	(2,498)	(2,070)	(1,437)	(2,958)
	26,550	27,900	33,300	35,950	39,600	45,250	47,050	48,250	49,250	49,300
Federal Government	(62)	(85)	(209)	(144)	(248)	(236)	(197)	(218)	(157)	(54)
	22,700	23,400	26,200	27,650	29,800	33,950	35,650	36,950	38,000	34,150
State Government	(60)	(29)	(49)	(40)	(149)	(132)	(171)	(181)	(163)	(165)
	19,400	20,250	23,550	25,150	27,400	30,850	32,050	32,850	33,700	33,900
Local Government	(17)	(7)	(19)	(42)	(45)	(50)	(25)	(35)	(26)	(47)
	21,300	23,450	31,350	34,450	37,600	39,950	40,150	40,150	40,000	39,950
All Education All Admin. Faculty					(9)	(44)	(130)	(175)	(146)	(232)
					28,600	45,250	49,250	51,200	52,450	52,650
All Education All Researchers*	(16)	(18)	(34)	(50)	(150)	(90)	(76)	(48)	(41)	(99)
	21,850	22,350	24,350	25,400	26,900	29,800	31,150	32,450	34,600	37,100
Consulting	(228)	(259)	(289)	(278)	(1,061)	(659)	(493)	(453)	(253)	(509)
	25,680	26,950	32,300	34,950	38,650	44,000	46,150	47,150	47,650	46,700
Research Laboratories	(149)	(123)	(260)	(243)	(977)	(890)	(850)	(760)	(597)	(876)
	26,700	28,100	33,950	36,900	41,000	47,350	49,250	50,350	50,700	49,450
Engineering Services	(51)	(61)	(79)	(78)	(256)	(258)	(204)	(150)	(157)	(371)
	24,450	26,000	31,950	34,600	37,950	42,550	43,900	44,850	45,800	46,150

* 12-month contract.

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineer's Salaries: Special Industry Report 1984

TABLE 123

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE BACCALAUREATE, 1984*

GEOGRAPHIC AREA	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
New England	(296)	(389)	(433)	(431)	(1,465)	(1,046)	(990)	(798)	(560)	(1,138)
	$25,600	$26,850	$32,100	$34,750	$38,650	$45,100	$47,250	$48,650	$49,500	$48,050
Middle Atlantic	(539)	(843)	(596)	(692)	(2,459)	(1,930)	(1,299)	(1,235)	(857)	(1,890)
	26,050	27,550	33,050	35,450	38,500	42,550	43,750	44,500	45,200	45,350
East North Central	(750)	(712)	(755)	(748)	(2,100)	(1,622)	(1,250)	(995)	(721)	(1,943)
	26,700	27,850	32,300	34,350	37,100	41,300	42,750	43,800	45,150	45,850
West North Central	(128)	(245)	(177)	(188)	(538)	(463)	(466)	(334)	(272)	(573)
	26,100	27,700	33,200	35,300	37,700	40,300	40,950	41,350	41,050	41,750
South Atlantic	(313)	(416)	(543)	(449)	(1,559)	(1,041)	(1,075)	(806)	(579)	(1,098)
	26,400	27,550	31,850	33,800	36,400	40,250	41,600	42,550	43,750	44,350
East South Central	(128)	(272)	(168)	(164)	(653)	(440)	(378)	(334)	(209)	(548)
	26,800	28,000	32,900	35,250	38,600	43,700	45,350	46,300	46,800	45,900
West South Central	(33)	(117)	(142)	(142)	(495)	(249)	(210)	(209)	(178)	(297)
	29,000	30,200	34,950	37,200	40,300	45,200	47,000	48,400	50,250	51,300
Mountain	(83)	(121)	(130)	(114)	(289)	(236)	(184)	(193)	(146)	(261)
	25,450	26,550	31,250	33,650	37,150	43,000	44,950	46,100	46,150	42,600
Pacific Coast	(198)	(231)	(322)	(327)	(797)	(615)	(583)	(549)	(331)	(647)
	25,550	26,600	31,100	33,500	37,150	44,150	47,000	49,100	50,850	47,300

*Includes only engineers employed in industry and in government.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Salaries: Special Industry Report 1984

TABLE 124

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY HIGHEST DEGREE AND SELECTED YEARS SINCE BACCALAUREATE, 1984 (WEIGHTED NATIONAL AVERAGE)

HIGHEST DEGREE	YEARS SINCE BACCALAUREATE								
	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
B. S.	(24,548) $27,250	(20,413) $31,850	(16,307) $33,900	(45,992) $36,550	(31,737) $40,300	(28,243) $41,550	(27,822) $42,400	(20,537) $43,400	(43,637) $43,850
M. S.	(1,518) 29,600	(3,039) 33,900	(5,059) 36,000	(19,762) 39,000	(14,378) 43,950	(11,369) 45,700	(8,872) 46,900	(6,276) 47,800	(8,964) 46,650
Ph. D.		(214) 36,700	(414) 38,650	(1,294) 41,600	(2,492) 46,850	(3,016) 48,900	(1,354) 50,400	(662) 51,350	(1,874) 46,950
ALL LEVELS	(26,146) 27,350	(23,666) 32,150	(21,781) 34,400	(67,049) 37,400	(46,608) 41,650	(42,628) 42,950	(38,049) 43,750	(27,476) 44,400	(54,476) 44,500

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985

TABLE 125

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION, 1981-85

LEVEL OF EDUCATION	MEDIAN INCOME			% INCREASE	
	1981	1984	1985	1981-84	1984-85
Less than BA/BS Degree	$35,000	$42,000	$43,500	20.0	3.4
B. A. Degree	40,000	45,600	48,049	14.0	5.4
B. S. Degree (Non-Eng.)	36,150	42,000	48,638	16.2	15.8
B. S. Degree (Engineering)	34,884	41,765	44,180	19.7	5.8
MA/MS Degree (not MBA or Engineering)	37,000	44,500	48,024	20.3	7.9
MBA Degree	38,500	46,010	48,860	19.5	6.2
M. S. Degree in Engineering	36,000	45,000	47,000	25.0	4.4
Doctorate	41,500	52,000	55,435	25.3	6.6

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985

TABLE 126

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING. 1981-85

BRANCH OF ENGINEERING	MEDIAN INCOME			% INCREASE	
	1981	1984	1985	1981-84	1984-85
Aeronautical and Aerospace	$36,400	$45,000	$47,360	23.6	5.2
Agricultural	34,469	39,000	45,000	13.1	15.4
Architectural		42,150	47,500		12.7
Chemical	39,150	47,000	49,200	20.1	4.7
Civil (General)	33,682	40,769	43,423	21.0	6.5
Civil (Primarily Structural)		42,270	45,000		6.5
Civil (Primarily Surveying)		36,400	39,817		9.4
Cost/Value		43,950	42,075		4.5
Electrical & Electronic	36,000	44,500	47,500	23.6	6.7
Industrial	35,660	44,198	45,000	23.9	1.8
Manufacturing		43,905	44,947		8.5
Mechanical	36,566	44,939	46,500	22.9	3.5
Metallurgical & Materials	35,000	42,750	47,600	22.1	11.3
Nuclear	38,000	47,640	48,228	25.4	1.2
Petroleum & Mining	44,550	51,059	57,000	14.6	11.6
Safety		40,000	41,842		4.6
Sanitary, Environmental & Pollution Control	33,389	40,500	42,900	21.3	5.9

TABLE 127

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION AND LENGTH OF EXPERIENCE, 1985

LENGTH OF EXPERIENCE	Less than Bachelor's Degree	B. S. in Engineering	M. S. in Engineering	Doctorate	M.B.A.
Under 1 Yr.	$	$25,500	$	$	$
1 Yr.		26,410	31,040		
2 Yrs.		27,950	28,110		
3 Yrs.		30,200	31,500		35,050
4 Yrs.		32,000	32,480		
5-9 Yrs.	38,000	35,810	37,175	42,549	36,860
10-14 Yrs.	37,577	41,665	42,972	44,120	46,000
15-19 Yrs.	42,500	45,788	49,700	55,000	50,550
20-24 Yrs.	48,000	49,815	50,608	55,555	51,625
25-29 Yrs.	46,900	50,000	54,550	56,667	56,050
30 Yrs. or More	45,000	54,600	56,700	62,500	55,200

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985.

TABLE 128

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION AND LENGTH OF EXPERIENCE, 1985

LENGTH OF EXPERIENCE	Construction/ Supervision	Project Study & Analysis	Design	Execu./ Administrative	Production Quality Control, Maintenance	Research and Development	Sales/ Marketing	Teaching/ Training
Under 1 Yr.	$24,000	$25,743	$23,108	$43,200	$27,582	$	$	$
1 Yr.	24,336	26,625	25,600	41,070	27,650	29,744		
2 Yrs.	24,700	27,600	27,600	30,750	28,400	28,944	28,950	
3 Yrs.	29,648	31,000	29,287	42,500	30,720	32,800	34,975	
4 Yrs.	30,250	35,000	31,000	34,140	33,784	32,987	34,500	
5-9 Yrs.	36,400	35,873	34,315	40,100	37,325	37,432	37,800	29,982
10-14 Yrs.	40,000	42,000	39,500	46,650	43,090	40,100	45,000	32,500
15-19 Yrs.	44,900	45,356	42,828	52,500	46,000	51,042	48,000	46,578
20-24 Yrs.	47,376	45,000	45,400	56,000	45,000	49,659	51,000	42,893
25-29 Yrs.	44,520	48,721	45,760	57,595	46,300	50,808	50,200	47,005
30 Yrs. or More	46,498	49,540	48,000	62,000	44,000	51,000	50,600	46,500

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985

TABLE 129

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINERING AND LENGTH OF EXPERIENCE, 1985

BRANCH OF ENGINEERING	Under 1 Yr.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5-9 Yrs.	10-14 Yrs.	15-19 Yrs.	20-24 Yrs.	25-29 Yrs.	30 Yrs. or More
Aeronautical & Aerospace	$	$	$	$	$32,500	$36,141	$39,520	$46,251	$52,700	$53,593	$55,380
Agricultural				28,889		32,970	39,250	49,950	41,000	45,799	52,322
Architectural						38,749	43,250	50,000	47,300	45,500	60,000
Chemical		25,200	30,984	32,810	35,200	37,475	47,580	53,463	53,000	51,000	60,000
Civil (General)	24,500	23,700	24,700	27,516	28,300	34,280	40,000	46,000	48,115	50,000	51,500
Civil (Primarily Structural)		22,710	25,868	27,175	28,900	34,199	40,000	46,900	49,830	56,000	55,000
Civil (Primarily Surveying)						28,000	34,940	40,772	48,000	47,100	47,750
Cost/Value						39,800	44,788	45,570		52,300	45,223
Electrical & Electronic	25,986	28,472	29,706	31,350	34,479	38,000	44,000	48,106	52,000	51,852	56,300
Industrial		27,940	27,490	32,220	31,250	37,600	37,860	44,500	53,000	51,425	55,000
Manufacturing			28,000	29,150	32,750	35,900	44,000	52,830	49,000	50,043	54,200
Mechanical	26,400	27,113	29,200	30,650	34,000	37,390	44,000	46,950	50,000	52,000	54,725
Metallurgical & Materials						37,750	41,984	56,500	48,250	46,950	65,550
Nuclear						40,500	48,000	52,500	65,350	62,100	64,500
Petroleum & Mining		31,521	35,300	36,960	36,105	48,000	61,150	67,000	66,199	74,303	68,500
Safety						34,300	39,050	48,000			46,050
Sanitary, Envir. & Pollution Control		29,000	25,080	27,110	28,700	34,812	39,255	50,000	49,800	54,750	55,429

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985

TABLE 130

NUMBER REPORTED, MEAN AND MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY INDUSTRY OR SERVICE OF EMPLOYER, 1985

INDUSTRY OR SERVICE OF EMPLOYER	Total Employees Reported	Median	Mean
All Manufacturing/Extractive Employers	**3,034**	**$46,545**	**$53,568**
Aerospace & Aircraft Products	281	43,700	48,155
Chemical, Pharmaceutical & Allied Products	332	49,050	56,078
Electrical & Electronic Equipment	487	46,450	53,252
Fabricated Metal Products	342	43,029	50,575
Food, Beverage & Tobacco Products	141	48,000	53,046
Machinery (except electrical)	196	45,300	52,158
Petroleum & Coal Products	448	54,000	63,023
Primary Metal Industries.	123	45,000	49,466
Rubber & Plastic Products	59	44,947	52,080
Stone, Clay & Glass and Concrete Products	121	45,909	52,534
Transportation Equipment	159	45,000	50,419
All Non-Manufacturing/Extractive Employers	**9,747**	**45,360**	**52,013**
College & Universities	516	49,382	51,330
Communication Services	201	46,300	52,669
Construction & Real Estate Development	644	50,000	62,264
Engineering Services	1,601	47,500	53,265
Government-Federal	670	42,548	43,694
Government-State	542	37,826	38,571
Government-Local	832	39,326	40,631
Private Practice	2,903	48,000	57,459
Research Organizations & Laboratories	119	50,400	54,220
Transportation Services	72	49,288	57,796
Utilities-Electric	932	45,954	49,484
Utilities-Gas	151	44,000	48,835
Utilities-Pipelines	81	52,000	56,895
Utilities-Other or Mixed	228	47,171	51,945

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985

TABLE 131

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION
1981-85

JOB FUNCTION	MEDIAN INCOME			% INCREASE	
	1981	1984	1985	1981-84	1984-85
Construction Supervision	$31,500	$38,000	$40,000	20.6	5.3
Design	30,374	37,500	39,136	23.5	4.4
Executive/Administrative	42,000	51,000	55,000	21.4	7.8
Production, Quality Control, Maintenance, etc.	31,800	38,185	40,584	20.1	6.3
Project Study & Analysis	37,000	39,800	41,200	7.6	3.5
Research and Development	35,000	43,000	46,000	22.9	7.0
Sales/Marketing	37,950	43,484	46,000	14.6	5.8
Teaching/Training	33,333	40,100	44,000	20.3	9.7

TABLE 132

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY REGION, 1981-85

REGION	MEDIAN INCOME			% INCREASE	
	1981	1984	1985	1981-84	1984-85
Northeastern States	$37,500	$45,400	$48,000	21.1	5.7
Southern States*	34,700	42,000	45,000	21.0	7.1
Great Lakes States	34,080	41,880	44,250	22.9	5.7
Great Plains States	33,600	40,000	42,100	19.0	5.3
Southwestern States	36,400	44,500	46,800	22.3	5.2
Pacific & Western States**	37,033	45,511	48,000	22.9	5.5

* Includes Puerto Rico and Panama. ** Includes Alaska, Hawaii, and Guam.

SOURCE: National Society of Professional Engineers, Professional Engineer Income and Salary Survey, 1985.

TABLE 133

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF PROFESSIONAL ENGINEERS BY METROPOLITAN AREA, 1985

METROPOLITAN AREA	Number Reported	Median	Mean
Atlanta (GA) & Vicinity	237	$48,999	$54,695
Baltimore (MD) & Vicinity	82	45,526	47,182
Boston (MA) & Vicinity	206	50,000	57,127
Chicago (IL) & Vicinty	532	46,000	51,967
Cincinnati (OH/KY/IN) & Vicinity	187	41,536	50,047
Cleveland (OH) & Vicinity	182	44,223	50,807
Dallas/Ft. Worth (TX) & Vicinity	374	50,345	60,710
Denver/Colorado Springs (CO) & Vicinity	194	46,070	52,152
Detroit (MI) & Vicinity	262	49,650	54,950
Houston (TX) & Vicinity	480	54,000	62,836
Indianapolis (IN) & Vicinity	90	44,808	51,704
Kansas City (MO/KS) & Vicinity	259	43,950	51,188
Los Angeles/Long Beach/San Diego (CA) & Vicinity	225	50,238	58,613
Miami (FL) & Vicinity	194	59,970	56,940
Milwaukee (WI) & Vicinity	156	44,975	55,456
Minneapolis/St. Paul (MN) & Vicinity	204	45,959	51,816
Naussau/Suffolk Counties (NY) & Vicinity	94	47,550	60,047
Newark/Jersey City (NJ) & Vicinity	246	49,500	56,278
New Orleans (LA) & Vicinity	130	47,633	56,092
New York City (NY) - 5 Boroughs	267	53,060	63,230
Philadelphia (PA/NJ) & Vicinity	347	48,150	55,432
Phoenix (AZ) & Vicinity	90	46,100	53,740
Pittsburgh (PA) & Vicinity	241	45,800	51,221
St. Louis (MO) & Vicinity	253	43,680	50,819
San Francisco/Oakland (CA) & Vicinity	118	54,156	63,263
San Jose (CA) & Vicinity	79	52,000	58,982
Seattle/Everett (WA) & Vicinity	101	46,500	54,083
Tampa/St. Petersburg (FL) & Vicinity	173	44,000	49,626
Washington (DC/MD/VA) & Vicinity	350	49,689	54,590

SOURCE: Engineering Career Associates Personnel Services, 1985 High Tech Engineering Salary Survey and Career Planning Guide.

TABLE 134

MEDIAN ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN HIGH-TECH FIRMS BY POSITION AND WORK ACTIVITY, 1985

POSITION	WORK ACTIVITY	
	DESIGN AND DEVELOPMENT	MANUFACTURING, TEST, QUALITY CONTROL
Associate Engineer		
1-2 Years	$32,600	$31,100
2-4 Years	36,100	33,600
Engineer/Senior Engineer*		
1-2 Years	36,800	34,800
2-4 Years	39,600	38,000
4-6 Years	43,900	42,600
6+ Years	47,300	46,000
Principal Engineer/ Project Leader	51,700	
Group Leader/Section Head	54,700	
Engineering Manager	61,400	57,500
Director of Engineering/VP	77,200	
Director of Manufacturing/VP		71,200

*For B.S. degreed Engineers

TABLE 135

MEDIAN ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN SALES/MARKETING IN HIGH-TECH FIRMS BY POSITION, 1985

POSITION	COMPENSATION
Field Engineer	$34,000
Applications Engineer	37,900
Product Manager	49,800
Sales Engineer	55,800
Sales/Marketing Manager	68,700
Director of Sales/Marketing/VP	86,000

SOURCE: The Hay Group, 1984 Hay Engineering Compensation Comparison

TABLE 136

WEIGHTED AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY WORK FOCUS AND LEVEL OF RESPONSIBILITY, 1984

WORK FOCUS	Entry Level Engineer	Journey-man Engineer	Engrg. Supvr.	Engrg. Manager
Applied Research	$28,200	$35,500	$44,400	$58,300
Basic Research	32,800	37,000	47,900	63,100
Facility Design/Const.	35,100	39,000	47,300	67,200
Field Installation & Service	26,700	37,400	46,500	64,100
Manufacturing	28,600	36,900	45,000	55,600
Plant Operations	28,600	33,800	42,100	58,500
Process Development	31,000	37,700	46,800	68,400
Product Development	27,400	34,600	46,200	60,800
Technical Sales and/or Services	26,700	32,900	45,100	65,400
Utility Operations	29,800	38,400	46,800	60,500
Other	29,700	36,700	44,800	58,600

SOURCE: The Hay Group, 1984 Hay Engineering Compensation Comparison

TABLE 137

WEIGHTED AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY DISCIPLINE AND LEVEL OF RESPONSIBILITY, 1984

DISCIPLINE	Entry Level Engineer	Journey-man Engineer	Engrg. Supvr.	Engrg. Manager
Aerospace	$29,800	$35,700	$43,200	$55,000
Chemical	29,200	37,000	49,400	70,900
Civil	28,300	37,800	46,000	60,100
Computer/Systems	28,100	35,200	44,900	58,900
Electrical	28,500	36,700	45,600	59,300
Industrial	28,800	37,100	44,700	60,600
Mechanical	28,400	35,900	45,800	58,100
Metallurgical	29,100	36,800	43,700	60,700
Nuclear	28,800	34,600	44,400	60,600
Other	31,500	37,000	45,400	61,800

TABLE 138

WEIGHTED AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY INDUSTRY AND LEVEL OF RESPONSIBILITY, 1984

INDUSTRY	Entry Level Engineer	Journey-man Engineer	Engrg. Supvr.	Engrg. Manager
Chemical-Petroleum	$30,600	$37,700	$51,500	$69,200
Consumer	29,000	36,600	50,600	73,100
Consulting R & D	29,000	37,500	45,700	61,700
Heavy Manufacturing	27,300	34,700	45,900	57,900
Light Manufacturing	28,400	35,700	44,800	61,300
High Technology	30,100	36,500	43,400	54,900
Utilities	29,100	36,500	45,000	60,400

TABLE 139

WEIGHTED AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY REGION AND LEVEL OF RESPONSIBILITY, 1984

REGION	Entry Level Engineer	Journey-man Engineer	Engrg. Supvr.	Engrg. Manager
New England	$27,800	$36,200	$44,700	$66,900
New York/New Jersey	28,600	36,100	48,500	62,900
Mid-Atlantic	27,600	35,000	42,500	54,600
South	28,500	36,200	43,600	57,000
Midwest	28,800	36,800	46,200	59,200
Plains	27,800	36,000	47,000	66,900
Southwest	29,900	38,500	54,100	68,700
West	32,600	36,900	45,600	62,000

SOURCE: Abbott Langer & Associates, Compensation of Industrial Engineers, Ninth Edition, April 1985

TABLE 140

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY TYPE OF EMPLOYER, JANUARY 1, 1985

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
MFG./EXTRACTIVE ORGANIZATIONS	**4,632**	**$37,000**	**$40,750**
Aerospace & Aircraft Products	430	36,860	40,177
Apparel & Other Textile Products	166	36,020	41,634
Chemical, Pharmaceutical & Allied Products	303	43,000	47,258
Electrical & Electronic Equipment	969	37,000	40,285
Fabricated Metal Products	590	34,500	38,945
Food, Beverage & Tobacco Products	263	41,700	46,095
Furniture & Wood Products	87	33,620	40,901
Instruments, Controls & Related Products	78	34,800	37,828
Machinery (Except Electrical)	131	36,000	39,172
Paper & Allied Products	132	38,400	41,861
Petroleum & Coal Products	49	46,716	51,617
Primary Metal Industries	202	38,350	41,572
Printing & Publishing	94	37,700	41,193
Rubber & Plastics Products	185	36,000	37,293
Stone, Clay & Glass Products	73	38,039	41,934
Textile Mill Products	97	34,250	39,766
Transportation Equipment	360	37,792	41,205
NON-MFG./EXTRACTIVE ORGANIZATIONS	**1,979**	**40,500**	**44,615**
Banks & Finance Organizations	95	36,600	42,676
College & Universities	276	42,200	45,568
Communications Services (T.V., Radio, Telephone & Telegraph)	57	40,000	44,381
Consultants (Engineering)	193	46,200	49,733
Consultants (Non-Engineering)	129	48,000	55,151
Government - Federal (including Military & Postal Service)	332	38,626	39,574
Government - State & Local	52	34,800	35,850
Health Care Organizations (Hospitals & Nursing Homes)	185	38,064	41,607
Mechandising (Wholesale & Retail)	94	39,317	45,969
Transportation Services	141	41,500	44,785
Utilities	221	40,800	43,767

SOURCE: Abbott Langer & Associates, Compensation of Industrial Engineers, Ninth Edition, April 1985

TABLE 141

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY METROPOLITAN AREA, JANUARY 1, 1985

METROPOLITAN/ GEOGRAPHIC AREA	Total Employees Reported	Median Income	Mean Income
NORTHEASTERN STATES	**1,496**	**$39,000**	**$43,464**
Boston & Vicinity	175	37,500	41,184
New York City & Vicinity (NY/NJ/CT)	457	42,800	49,280
Philadelphia & Vicinity (PA/NJ)	223	38,100	41,031
Pittsburgh & Vicinity (PA/OH)	125	38,500	43,459
Northeastern States (excluding specific areas above)	516	36,350	40,138
SOUTHEASTERN STATES	**1,648**	**37,500**	**40,900**
Atlanta & Vicinity	144	38,855	41,783
Washington/Baltimore & Vicinity (DC/MD/VA)	241	40,361	44,133
State of Florida	236	38,000	40,901
Southeastern States (excluding specific areas above)	1,027	36,620	40,018
GREAT LAKES STATES	**1,354**	**37,000**	**41,226**
Chicago & Vicinity (IL/IN)	387	38,500	42,622
Detroit & Vicinity	136	40,000	43,561
State of Ohio	366	37,310	40,525
Great Lakes States (excluding specific areas above)	465	35,000	39,934
NORTH CENTRAL STATES	**557**	**37,000**	**39,846**
Minneapolis/St. Paul & Vicinity (MN/WI)	120	36,442	38,137
St. Louis & Vicinity (MO/IL)	104	38,032	42,211
North Central States (excluding specific areas above)	333	37,000	39,723
SOUTH CENTRAL STATES	**555**	**38,000**	**41,703**
Dallas/Ft. Worth & Vicinity	176	37,475	42,766
Houston & Vicinity	96	43,200	45,241
South Central States (excluding specific areas above)	283	36,700	39,843
MOUNTAIN STATES	**226**	**38,769**	**40,799**
Denver/Boulder/Colorado Springs/ Pueblo & Vicinity	67	38,550	40,273
Phoenix & Vicinity	59	37,865	41,243
Mountain States (excluding specific areas above)	100	39,848	40,889
PACIFIC STATES	**737**	**40,561**	**44,376**
Los Angeles/San Diego & Vicinity	348	42,000	44,493
San Francisco/Oakland & Vicinity	212	42,088	46,793
Seattle/Everett & Vicinity	57	39,051	42,274
Pacific States (excluding specific areas above)	120	36,303	40,764

SOURCE: Abbott Langer & Associates, Compensation of Industrial Engineers, Ninth Edition, April 1985

TABLE 142

NUMBER AND TOTAL ANNUAL COMPENSATION OF INDUSTRIAL ENGINEERS BY DEGREE LEVEL, JANUARY 1, 1985

DEGREE LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	324	$48,100	$51,937
M.S., M.E., or M.A. Degree	1,083	41,722	46,341
MBA	919	43,000	47,655
B.S. (Engineering)	2,524	35,100	39,664
B.A./B.S. (Non-Engineering)	1,075	36,000	38,968
Less than Bachelor's Degree	628	33,000	35,431

TABLE 143

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY YEARS OF EXPERIENCE, JANUARY 1, 1985

YEARS OF EXPERIENCE	Total Employees Reported	Median Income	Mean Income
Under One Year	50	$26,400	$30,710
One Year	147	26,675	26,387
Two Years	284	28,440	29,079
Three Years	349	29,900	30,243
Four Years	386	32,000	31,923
5 through 9 Years	1,493	35,000	35,778
10 through 14 Years	1,186	40,000	42,270
15 through 19 Years	818	43,743	46,270
20 through 24 Years	661	44,850	49,999
25 through 29 Years	550	46,000	50,294
30 Years and Over	693	49,500	55,896

SOURCE: Abbott Langer & Associates, Compensation of Industrial Engineers, Ninth Edition, April 1985

TABLE 144

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY PRIMARY JOB FUNCTION, JANUARY 1, 1985

PRIMARY JOB FUNCTION	Total Employees Reported	Median Income	Mean Income
Corporate Official, General Mangement	526	$58,500	$68,173
Functional Management, Department Head	1,483	44,500	47,001
Supervisor of Technical or Professional Personnel	804	39,798	41,048
Engineer, Analyst or Other Professional	2,930	32,500	33,667
Consultant	453	45,000	50,334
Educator	266	42,000	44,979

TABLE 145

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY PRIMARY ACTIVITY OR SPECIALTY, JANUARY 1, 1985

PRIMARY ACTIVITY OR SPECIALITY	Total Employees Reported	Median Income	Mean Income
Cost Control/Reduction Programs	533	$37,100	$39,445
Engineering Economics	104	40,400	44,738
Facility Planning Design, Layout Environment Protection	465	37,380	41,040
Management Information Systems	298	39,576	41,487
Computer Operations, Systems, Software	221	37,880	40,656
Organizations, Admin.-IE Dept., Plant	756	43,946	48,441
Materials Handling	126	37,500	39,199
Warehousing, Shipping, Receiving	76	38,750	39,821
Methods, Engineering, Proc. Design, Value Analysis, Human Productivity	760	34,075	36,197
Manufacturing Engineering, Automation	526	36,360	39,087
Maintenance, Plant Engineering	156	39,985	41,681
Operations Supervision, Assembly, Clerical, Office	151	41,000	43,957
Mathematical Models, Networks, Simulation	160	41,000	43,764
Production and Inventory Control, Scheduling, Forecasting	153	36,700	40,327
Materials Management	88	43,000	45,095
Quality Control, Reliability	162	37,000	40,213
Work Measurement, Standards Performance Measures	763	32,000	33,972
Incentive Plans, Groups, Individ., Supv.	97	35,000	41,533

SOURCE: Abbott, Langer & Associates, Compensation in Manufacturing, (Engineers and Managers), Fifth Edition, 1984

TABLE 146

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY YEARS OF EXPERIENCE, 1984

YEARS OF EXPERIENCE	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Under 5 Years	226	$27,148	$27,570	226	$27,500	$28,081
5-9 Years	276	29,753	29,909	276	30,000	30,570
10-14 Years	187	31,700	32,603	187	32,180	33,650
15-19 Years	174	31,918	33,089	174	32,600	33,909
20-24 Years	151	35,120	35,520	151	36,000	36,722
25-29 Years	131	35,000	36,295	131	35,040	37,414
30 Years and Over	191	36,828	37,749	191	37,500	38,780

TABLE 147

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF TRAINING, 1984

COLLEGE/TECHNICAL INSTITUTE MAJOR	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Electrical Engineering	71	$32,100	$34,564	71	$33,250	$35,005
Industrial Enginering	131	30,000	31,588	131	30,000	32,301
Manufacturing Engineering	141	31,000	31,813	141	31,000	32,395
Mechanical Engineering	488	32,464	33,606	488	33,295	34,550
Other Engineering Major	145	32,040	33,611	145	33,000	34,354
Some Field Other Than Engineering	267	30,085	31,704	267	30,592	32,785
Did Not Attend College/ Technical Institute	105	30,000	31,650	105	31,045	32,611

SOURCE: Abbott, Langer & Associates, Compensation in Manufacturing, (Engineers and Managers), Fifth Edition, 1984

TABLE 148

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF EMPLOYER, 1984

TYPE OF EMPLOYER	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Aerospace & Aircraft Products	195	$33,280	$34,201	195	34,736	34,807
Chemical, Pharmaceutical, Rubber & Plastic Products	74	30,835	34,037	74	32,350	34,625
Electrical and Electronic Equipment	238	32,100	33,978	238	32,800	34,607
Fabicated Metal Products	226	29,312	30,091	226	30,000	30,987
Instruments, Controls & Related Products	47	29,850	30,903	47	29,850	31,152
Machinery (Except Electrical)	121	30,654	32,307	121	30,694	33,406
Primary Metal Industries	43	31,000	33,060	43	33,500	34,921
Transportation Equipment	169	33,000	33,548	169	33,180	34,296
All Non-Mfg. Employers	82	33,131	33,699	82	34,838	35,734
All Manufacturing/ Extractive Employers	1,271	31,460	32,669	1,271	32,000	33,457

TABLE 149

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1984

EDUCATION LEVEL	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Graduate Degree	188	$35,704	$36,982	188	$36,000	$38,321
B. S. in Engineering	420	32,464	34,226	420	33,215	34,890
Other BA/BS Degree	150	30,150	31,767	150	30,719	32,528
Engineering Technician Degree	168	29,570	30,128	168	29,943	30,812
Some College (No Degree)	288	30,000	30,700	288	30,647	31,649
No College	74	29,950	30,969	74	30,000	32,052

SOURCE: Abbott, Langer & Associates, Compensation in Manufacturing, (Engineers and Managers), Fifth Edition, 1984

TABLE 150

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY GEOGRAPHIC AREA, 1984

GEOGRAPHIC AREA	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
NORTHEASTERN STATES	**814**	**$30,190**	**$32,338**	**314**	**$31,000**	**$33,116**
Boston (MA) & Vicinity	52	33,700	33,656	52	33,700	34,176
New York City (NY/NJ) & Vicinity	32	31,863	34,963	32	32,750	36,556
Philadelphia (PA/NJ) & Vicinity	40	30,000	32,251	40	30,000	32,665
Pittsburgh (PA/OH) & Vicinity	27	29,000	31,945	27	31,000	33,274
Northeastern States (excluding areas above)	163	30,000	31,489	163	30,787	32,187
SOUTHERN STATES	**187**	**31,116**	**31,973**	**187**	**31,500**	**32,524**
Washington (DC/MD/VA) & Vicinity	29	32,000	34,769	29	33,200	35,053
State of Florida	16	32,534	32,472	16	33,750	33,191
Southern States (excluding areas above)	142	30,800	31,345	142	31,143	31,933
GREAT LAKES STATES	**393**	**31,000**	**32,070**	**393**	**32,000**	**33,357**
Chicago (IL/IN) & Vicinity	75	30,670	31,701	75	31,000	33,260
Detroit (MI) & Vicinity	88	34,370	34,502	88	34,870	36,094
State of Ohio	98	30,785	31,610	98	31,160	33,224
Great Lakes States (excluding areas above)	132	29,600	30,999	132	30,472	31,686
NORTH CENTRAL STATES	**139**	**30,500**	**31,717**	**139**	**32,000**	**32,576**
Minneapolis/St. Paul (MN/WI) & Vicinity	32	34,172	33,986	32	34,780	34,667
St. Louis (MO/IL) & Vicinity	27	29,850	30,645	27	29,850	30,768
North Central States (excluding areas above)	80	30,000	31,171	80	30,538	32,350
SOUTH CENTRAL STATES	**83**	**30,000**	**33,342**	**83**	**30,480**	**33,693**
Dallas/Ft. Worth (TX) & Vicinity	26	31,295	34,472	26	31,295	34,472
Houston (TX) & Vicinity	16	35,950	39,198	16	36,744	40,145
South Central States (excluding areas above)	41	29,700	30,341	41	30,000	30,681
MOUNTAIN STATES	**58**	**31,321**	**32,412**	**58**	**31,321**	**32,882**
Denver/Boulder/Colorado Springs/ Pueblo (CO) & Vicinity	22	31,321	33,409	22	31,321	33,593
Mountain States (excluding areas above)	36	31,106	31,803	36	31,106	32,447
PACIFIC STATES	**170**	**35,479**	**36,506**	**170**	**36,000**	**37,319**
Los Angeles/San Diego (CA) & Vicinity	94	36,000	36,437	94	36,000	37,348
San Francisco/Oakland (CA) & Vicinity	41	40,000	39,220	41	40,000	40,148
Seattle/Everett (WA) & Vicinity	18	34,950	35,191	18	34,950	35,350
Pacific States (excluding areas above)	17	30,000	31,734	17	31,400	32,417

TABLE 151

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF MANAGERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1984

EDUCATION LEVEL	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Graduate Degree	480	$47,838	$50,045	480	$50,000	$55,818
B. S. in Engineering	681	43,000	47,764	681	45,000	52,938
Other BA/BS Degree	311	40,000	45,674	311	42,600	49,963
Engineering Technician Degree	220	35,000	40,261	220	36,400	43,147
Some College (No Degree)	544	36,610	43,055	544	38,854	46,784
No College	183	38,000	45,305	183	40,000	50,063

SOURCE: Abbott, Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985.

TABLE 152

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY HIGHEST DEGREE EARNED, 1985

HIGHEST DEGREE EARNED	Number Reported	Mean Income	Median Income
Doctoral Degree	1,270	$60,863	$56,469
MBA Degree	317	55,806	51,000
M.S.E.E. Degree	1,729	54,380	50,440
Master's (Not M.S.E.E. or MBA Degree)	848	52,018	48,750
B.S.E.E. Degree	3,444	45,925	45,524
Other B.S. Degree	581	47,013	41,105
B.E.T. or B.S.E.T. Degree	224	34,261	31,776
B.A. Degree	178	49,155	44,994
E.T., A.S., or A.A. (Two-Year Degree)	131	40,140	38,693
Two Years of College or More (But no Degree)	148	47,061	43,200
Under Two Years of College	51	52,458	42,588
No College	31	69,529	48,300

TABLE 153

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY YEARS OF EXPERIENCE, 1985

YEARS OF EXPERIENCE	Number Reported	Mean Income	Median Income
One Year	530	$28,307	$28,000
Two Years	400	31,750	30,120
Three Years	313	34,195	32,629
Four Years	265	37,443	35,700
Five Years	254	39,084	37,690
Six Years	279	40,804	39,000
Seven Years	300	42,923	40,253
Eight Years	277	44,334	41,239
Nine Years	187	46,041	43,000
10 - 11 Years	550	47,365	45,383
12 - 13 Years	521	50,480	47,000
14 - 15 Years	586	54,317	50,000
16 - 17 Years	440	56,002	53,000
18 - 19 Years	444	56,176	52,330
20 - 21 Years	425	59,056	53,226
22 - 23 Years	374	60,240	55,344
24 - 25 Years	555	60,478	55,000
26 - 27 Years	318	58,298	54,821
28 - 29 Years	301	60,607	57,500
30 Years or More	534	62,680	56,000

SOURCE: Abbott Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985

TABLE 154

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY AGE, 1985

AGE	Number Reported	Mean Income	Median Income
Under 25 Years	721	$28,594	$28,300
25 - 29 Years	1,074	35,130	33,826
30 - 34 Years	1,274	43,648	41,700
35 - 39 Years	1,295	50,191	46,343
40 - 44 Years	1,211	56,620	52,749
45 - 49 Years	982	59,498	55,026
50 - 54 Years	912	60,830	55,151
55 - 59 Years	933	60,791	55,500
60 - 64 Years	498	61,261	54,425
65 Years or More	121	61,181	54,588

TABLE 155

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME BY SEX AND RACE, 1985

SEX AND RACE	Number Reported	Mean Income	Median Income
Male	8,623	$51,161	$47,500
Female	328	36,817	32,450
White (Not of Hispanic Origin)	8,122	50,780	47,192
Black	50	44,566	41,375
Hispanic	97	44,466	40,800
Asian/Pacific Islander	432	47,710	45,000

TABLE 156

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY LEVEL OF PROFESSIONAL RESPONSIBILITY, 1985

PROFESSIONAL RESPONSIBILITY LEVEL	Number Reported	Mean Income	Median Income
Engineer 1 (Equivalent to GS-5)	297	$27,117	$27,500
Engineer 2 (Equivalent to GS-7)	446	29,956	29,400
Engineer 3 (Equivalent to GS-9)	721	33,084	32,000
Engineer 4 (Equivalent to GS-11)	1,330	40,960	40,000
Engineer 5 (Equivalent to GS-12)	1,423	46,242	45,153
Engineer 6 (Equivalent to GS-13)	1,607	51,102	49,400
Engineer 7 (Equivalent to GS-14)	1,324	59,211	55,881
Engineer 8 (Equivalent to GS-15)	863	74,388	68,000
Other	45	51,766	48,000

SOURCE: Abbott, Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985.

TABLE 157

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY INDUSTRY OR SERVICE OF EMPLOYER, 1985

INDUSTRY OR SERVICE OF EMPLOYER	Number Reported	Mean Income	Median Income
Aerospace & Defense	1,970	$50,888	$48,645
Paper & Applied Products	34	45,305	48,170
Chemical & Allied Products	89	50,539	47,700
Petroleum & Related Products	105	56,732	53,000
Rubber & Plastic Products	20	46,294	43,850
Primary Metal Products	39	48,594	44,636
Fabricated Metal Products	20	46,225	41,108
Machinery, except Electrical	30	41,386	38,790
Steam Engines, Turbines & Turbine Generator Sets	23	49,027	46,570
Computer Hardware	762	49,304	45,505
Computer Software	226	50,840	47,000
Electronic Machinery, Equipment & Supplies	250	54,776	50,573
Electric Measuring Instruments & Test Equipment	169	50,550	45,867
Power, Distribution & Specialty Transformers	103	42,528	39,000
Consumer Radio & TV Sets	55	49,404	47,020
Telephone & Telegraph Apparatus	294	55,622	49,748
Transportation Equipment	34	49,182	46,750
Motor Vehicle	56	43,992	35,758
Aircraft	32	40,994	40,000
Manufacturers of Instruments - Professional, Scientific, Controlling, Photo & Optical Goods, Watches & Clocks	93	51,431	45,700
Engineering Lab, Scientific & Research Instruments and Associated Equipment	121	48,929	43,587
Instruments - Measuring, Controlling & Indicating Physical Characteristics	148	49,376	46,000
Photo Equipment	26	54,033	48,112
Miscellaneous Manufacturing Industries	133	53,282	47,000
Communications Services	303	54,558	48,400
Telephone Services	96	48,502	45,050
Television Broadcasting	29	59,236	53,400
Electrical, Gas & Sanitary Systems	112	49,207	43,596
Electrical Companies & Systems	635	50,064	47,900
Electrical & Other Services Combined	88	51,382	49,506
Business Services	22	65,662	50,675
Computer & Data Processing Services	87	51,135	47,300
Medical & Health Services	138	48,628	40,000
Education Services	239	45,569	42,777
Services Not Classified	39	51,827	47,544
Consulting Engineers	449	54,415	49,000
Electronics Components & Accessories	333	56,452	50,000
Nonprofit Education & Research Agencies	291	49,195	47,500
Federal Government	664	45,503	45,085
State Government	41	44,543	42,900
Local Government	25	43,869	44,000
Government Support Services	81	42,596	41,600
Others (Not Listed)	420	51,572	45,000

SOURCE: Abbott, Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985.

TABLE 158

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE, 1985

PRIMARY TECHNICAL COMPETENCE	Number Reported	Mean Income	Median Income
Acoustics, Speech & Signal Processing	181	$50,409	$45,900
Aerospace & Electronic Systems	679	54,436	51,362
Antennas & Propagation	132	55,215	50,550
Broadcasting	40	49,222	46,910
Cable Systems	52	56,855	48,325
Circuits & Systems	538	44,334	41,153
Communications	833	52,912	48,100
Components, Hybrids	143	55,024	49,100
Computer Hardware	649	45,089	40,040
Computer Maintenance	34	34,616	35,672
Computer Operations	48	45,369	42,698
Computer Software	1,128	45,317	42,000
Consumer Electronics	49	44,304	40,800
Control Systems	269	46,825	44,400
Education	167	46,225	43,000
Electrical Insulation	29	52,531	47,849
Electromagnetic Compatibility	69	51,819	48,000
Electron Devices	227	56,179	53,400
Electro-Optical Systems	134	55,445	52,873
Energy	79	53,267	49,000
Engineering Management	919	63,819	59,525
Engineering in Medicine & Biology	124	48,481	41,000
Engineering Writer	24	38,507	39,480
Industrial Elec. & Control Instrumentation	239	45,377	42,110
Industry Applications	279	46,948	46,100
Instrumentation & Measurement	238	48,058	44,706
Magnetics	50	53,787	48,100
Manufacturing Technology	52	49,230	43,398
Microwave Theory & Techniques	145	40,233	48,000
Nuclear and Plasma Sciences	31	53,774	51,400
Power Engineering	970	48,178	45,000
Radiation	21	59,958	50,008
Reliability	92	43,023	42,183
Sonics & Ultrasonics	24	55,112	51,125
Transportation	30	53,352	52,000
Other Technical	131	51,305	45,235
Non-Technical	34	72,414	65,250
Non-E/E Engineer	39	54,025	52,000

SOURCE: Abbott, Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985.

TABLE 159

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY GEOGRAPHIC AREA, 1985

GEOGRAPHIC AREA	Number Reported	Mean Income	Median Income
Northeastern States (Excluding Boston, New York City & Vicinities	1,006	$51,467	$48,000
Boston & Vicinity	466	52,096	50,000
New York City & Vicinity	458	56,273	51,461
Eastern States (Excluding Philadelphia, Washington/Baltimore & Vicinities)	610	50,100	46,200
Philadelphia & Vicinity	230	52,612	48,076
Washington/Baltimore & Vicinity	773	52,751	48,876
Southeastern States (Excluding Florida, Atlanta/Huntsville & Vicinity)	572	45,867	43,568
Florida	233	47,584	44,900
Atlanta/Huntsville & Vicinity	229	47,694	45,000
Central States (Excluding Chicago/ Milwaukee & Vicinity	615	46,179	42,360
Chicago/Milwaukee & Vicinity	366	49,074	43,865
Southwestern States (Excluding Houston/ Dallas & Vicinity)	625	45,716	41,784
Houston/Dallas & Vicinity	425	47,281	45,559
Western States (Excluding Los Angeles/ San Diego/San Francisco/Oakland & Vicinities)	730	47,661	43,688
Los Angeles/San Diego & Vicinity	877	53,304	49,920
San Francisco/Oakland & Vicinity	692	56,936	53,000

SOURCE: Abbott, Langer & Associates, sponsored by Institute of Electrical and Electronics Engineers, Inc., IEEE U.S. Membership Salary and Fringe Benefit Survey, 1985.

TABLE 160

NUMBER, MEDIAN AND MEAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY JOB FUNCTION, 1985

JOB FUNCTION	Number Reported	Mean Income	Median Income
Basic Research	381	$53,526	$49,600
Computer Applications (Programming, Systems Software Engineering)	1,064	43,175	40,760
Computer Systems/Operations	119	43,032	40,336
Consulting	412	58,548	52,780
Dean, Professor, Instructor, etc.	373	46,567	43,000
Design & Development Engineering	2,418	48,401	45,815
Engineering Services Evaluation (Quality Control, Reliability Standards, Tests)	422	42,943	41,050
Engineering Sys. Planning & Design (Utilities)	632	48,626	46,290
Engineering Systems Planning & Design (not Utilities)	571	49,339	48,000
Engineering Support (Draftsman, Laboratory Assistant, Technician)	42	25,467	24,660
General & Corporate Management	720	78,089	68,700
Manufacturing & Production	166	47,305	42,874
Marketing/Sales	306	56,412	51,950
Member of Technical Staff (MTS)	615	49,109	48,500
Operations, Construction & Maintenance (Utilities)	238	45,811	43,750
Operations, Construction & Maintenance (not Utilities)	126	43,010	43,018
Other E.E.	87	41,008	41,699
Other Engineers (not E.E.)	40	45,150	45,860
Other (not Covered in Other Categories)	276	51,349	50,000

SALARIES OF TECHNICIANS

Median annual salaries of engineering technicians with two-year degrees ranged from a low of $18,250 for those beginning their careers to $21,110 for those with 33 years of experience, according to the 1983 survey of **SALARIES OF ENGINEERING TECHNICIANS**, conducted by the **Engineering Manpower Commission** of the **American Association of Engineering Societies.** It is interesting to note that the salary difference between a beginning engineering technician and one with 33+ years of experience is only $2,860 or 15.7% (Table 161).

Engineering technicians with a bachelor's degree do slightly better through their careers in earnings compared to engineering technicians with only a two-year degree. Beginning bachelor's degree engineering technicians reported a median salary of $22,300 compared to a salary of $26,400 for one with 33+ years of experience. This breaks down to a salary differential of $4,100 or 18.4% more after 33 years of working (Table 162).

Table 163 presents average salaries of engineering technicians by type of degree and years of experience.

Engineering Career Associates Personnel Services in its **1985 HIGH TECH ENGINEERING SALARY SURVEY ...** found median compensation for technicians employed in high tech firms was $28,200 in 1985 (Table 164).

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians, 1983

TABLE 161

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING TECHNICIANS BY YEARS OF EXPERIENCE, 1983

YEARS OF EXPERIENCE	NUMBER	SALARY	
		MEDIAN	MEAN
0	1,163	$18,250	$18,900
1	648	19,650	19,900
2	449	20,850	20,850
3	350	21,900	21,650
4	307	22,750	22,400
5	293	23,350	23,000
6	241	23,800	23,500
7	210	24,050	23,900
8	195	24,150	24,200
9-11	271	24,050	24,500
12-14	305	23,450	24,400
15-17	167	22,800	23,900
18-20	149	22,200	23,300
21-23	150	21,750	22,700
24-26	119	21,450	22,200
27-29	110	21,250	21,850
30-32	182	21,150	21,500
33+	294	21,110	21,300

TABLE 162

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING BACHELOR'S DEGREE TECHNICIANS BY YEARS OF EXPERIENCE, 1983

YEARS OF EXPERIENCE	NUMBER	SALARY	
		MEDIAN	MEAN
0	620	$22,300	$22,500
1	518	23,150	23,100
2	412	23,950	23,700
3	373	24,650	24,250
4	288	25,250	24,800
5	314	25,800	25,300
6	299	26,250	25,750
7	233	26,600	26,200
8	229	26,900	26,600
9-11	366	27,300	27,250
12-14	430	27,500	28,000
15-17	155	27,450	28,400
18-20	101	27,250	28,500
21-23	82	27,000	28,450
24-26	64	26,800	28,200
27-29	52	26,600	27,900
30-32	90	26,500	27,500
33+	57	26,400	26,950

Source: Engineering Manpower Commission, Salaries of Engineering Technicians, 1983

TABLE 163

AVERAGE SALARIES OF ENGINEERING TECHNICIANS BY YEARS OF EXPERIENCE, 1983

DEGREE LEVEL	YEARS OF EXPERIENCE						
	0	2	5	8	12-14	18-20	24-26
Bachelor's Degree	$22,500	$23,700	$25,300	$26,600	$28,000	$28,500	$28,200
Tech. Schools	22,200	24,050	26,800	29,100	31,550	31,500	29,150
Corporations	22,550	23,100	23,900	24,650	25,800	27,050	27,950
Associate Degree	16,700	18,200	20,350	22,350	25,000	26,900	27,700
Tech. Schools	15,450	16,100	17,150	18,250	20,000	22,000	23,600
Corporations	18,300	19,400	21,100	22,650	25,000	27,000	28,000
No Degree	15,050	16,350	18,150	19,800	21,950	23,650	24,600
Tech. Schools	14,250	15,150	16,400	17,600	19,200	20,500	21,100
Corporations	15,100	16,400	18,200	19,850	22,050	23,800	24,800
All Technicians	18,350	19,100	20,250	21,350	23,000	24,550	25,550
Tech. Schools	18,900	20,850	23,000	24,200	24,400	23,300	22,200
Corporations	17,400	18,350	19,700	21,000	22,900	24,650	25,650

Source: 1985 High Tech Engineering Salary Survey & Career Planning Guide, Engineering Career Associates Personnel Services.

TABLE 164

MEDIAN ANNUAL COMPENSATION OF TECHNICAL SUPPORT PERSONNEL EMPLOYED IN HIGH-TECH FIRMS BY POSITION, 1985

POSITION	COMPENSATION
Technician	$28,200
Draftsperson/Designer/CAD	30,800
Technical Writer	33,000

FEDERAL SALARIES

On January 1, 1985, the federal government's white-collar workers received a 3.5% salary increase. Under federal rules to achieve comparability between the pay schedule of federal white-collar workers and industry, an 18% increase could have gone into effect on October 1, 1984 if the President had not acted by August 31, 1984 to submit an alternate recommendation. The President has requested no increase for federal workers for 1986 and Congress, needing a two-thirds vote to change this, has not done so. Additionally, the salary ceiling was raised to $68,700. Table 165 presents the white-collar salary schedule effective as of January 1, 1985 that will be in effect through at least September 30, 1986 as well.

Table 166 presents the number, median grade and average salary of federal white-collar workers by sex in selected occupations for all geographical areas of the U.S. as of October 1, 1983. Women continue to be paid less than men in almost every occupational series listed. In the engineering and architecture series, women's salaries as a percentage of men's ranged from a high of 84.3% in architecture to a low of 60.1% in mining engineering. However, there were only eight women mining engineers employed by the federal government. In the engineering occupations with significant numbers of women, their salaries as a percentage of men's ranged between 71 and 76 percent.

In the physical sciences, those workers employed in astronomy and space science reported the highest average salary - $45,661. In this occupation, women earned 89.6% as much as men. As expected, the lowest salaries were reported by technicians.

In the life sciences series, those workers employed in agricultural extension earned the highest average salary - $52,070. This is also the only field in this series in which women earned more than men - $53,108 for women compared to $51,777 for men.

In the health sciences series, women earned slightly more than men in a few of the fields in which they dominate. In nursing, women were 92.1% of all nurses employed by the federal government and had an average salary of $24,702 compared to $23,586 for men. Other fields in which women dominate and have higher average salaries than men include nurse anesthetist, medical record technician, and dental assistant.

In the social and behavioral sciences, economists reported the highest average salaries - $39,363. However, in this field, women earned only 82.3% as much as men.

The **U. S. Department of Labor** in its **NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY** collects data on private industry employment. Table 167 compares that data for selected occupations and levels of responsibility with salaries paid to federal workers as of March 1984.

Salaries of doctoral scientists and engineers employed by the federal government are compared for 1979 through 1983 in Table 168. These data are published by the **National Science Foundation** in its **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES, 1983.** In 1983, the highest median salary was paid to economists ($48,900), followed by atmospheric scientists ($48,000), while oceanographers ($41,500) and biological scientists ($42,000) earned the least.

In **SALARIES 1985,** the **American Chemical Society** analyzed salary information on its members employed in government. Table 169, which presents salaries of chemists by degree level and work function, shows that those engaged in management activities reported the highest salaries, regardless of degree level. The highest median salary was reported by Ph.D. chemists engaged in the management of R & D - $57,800, while the lowest salary was for B.S. chemists working in forensic functions - $26,000.

SOURCE: U. S. Office of Personnel Management

TABLE 165

ANNAUL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS, JANUARY 1, 1985

GS	1	2	3	4	5	6	7	8	9	10
1	$ 9,339	$ 9,650	$ 9,961	$10,271	$10,582	$10,764	$11,071	$11,380	$11,393	$11,686
2	10,501	10,750	11,097	11,393	11,521	11,860	12,199	12,538	12,877	13,216
3	11,458	11,840	12,222	12,604	12,986	13,368	13,750	14,132	14,514	14,896
4	12,862	13,291	13,720	14,149	14,578	15,007	15,436	15,865	16,294	16,723
5	14,390	14,870	15,350	15,830	16,310	16,790	17,270	17,750	18,230	18,710
6	16,040	16,575	17,110	17,645	18,180	18,715	19,250	19,785	20,320	20,855
7	17,824	18,418	19,012	19,606	20,200	20,794	21,388	21,982	22,576	23,170
8	19,740	20,398	21,056	21,714	22,372	23,030	23,688	24,346	25,004	25,662
9	21,804	22,531	23,258	23,985	24,712	25,439	26,166	26,893	27,620	28,347
10	24,011	24,811	25,611	26,411	27,211	28,011	28,811	29,611	30,411	31,211
11	26,381	27,260	28,139	29,018	29,897	30,776	31,655	32,534	33,413	34,292
12	31,619	32,673	33,727	34,781	35,835	36,889	37,943	38,997	40,051	41,105
13	37,599	38,852	40,105	41,358	42,611	43,864	45,117	46,370	47,623	48,876
14	44,430	45,911	47,392	48,873	50,354	51,835	53,316	54,797	56,278	57,759
15	52,262	54,004	55,746	57,488	59,230	60,972	62,714	64,456	66,198	67,940
16	61,296	63,339	65,382	67,425	69,468*	71,511*	73,554*	75,597*	77,640	
17	71,840*	74,197*	76,590*	78,983*	81,376*					
18	84,157*									

* The rate of basic pay payable to employees is limited to the rate payable for level V of the Executive Schedule, which is $68,700.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Engineering	17,959	13.0	$42,482	17,526	$42,782	433	30,369	71.0
Engineering Technician	26,385	9.0	24,144	24,089	24,786	2,296	17,410	70.2
Safety Engineering	634	12.0	37,417	615	37,667	19	29,314	77.8
Fire Prevention Engineering	136	13.0	37,560	135	37,621	1	29,374	78.1
Materials Engineering	1,025	12.0	38,559	950	39,404	75	27,863	70.7
Landscape Architecture	655	12.0	33,913	589	34,643	66	27,406	79.1
Architecture	1,765	12.0	34,371	1,628	34,794	137	29,347	84.3
Construction Control	4,468	9.0	23,231	4,347	23,336	121	19,444	83.3
Civil Engineering	16,803	12.0	35,479	16,069	35,888	734	26,521	73.9
Surveying Technician	2,291	5.0	15,185	2,109	15,494	182	11,598	74.9
Engineering Drafting	1,818	5.0	16,595	1,404	16,758	414	16,045	95.7
Environmental Engineering	2,030	12.0	35,922	1,847	36,542	183	29,658	81.2
Construction Analyst	728	12.0	31,613	709	31,792	19	24,940	78.4
Mechanical Engineering	12,048	12.0	34,018	11,632	34,326	416	25,392	74.0
Nuclear Engineering	2,818	12.0	37,971	2,710	38,381	108	27,686	72.1
Electrical Engineering	4,661	12.0	35,345	4,552	35,517	109	28,130	79.2
Electronics Engineering	22,115	12.0	37,357	21,506	37,641	609	27,344	72.6
Electronics Technician	21,009	11.0	29,912	20,530	30,131	479	20,521	68.1
Biomedical Engineering	218	12.0	32,364	200	33,023	18	25,040	75.8
Aerospace Engineering	8,431	13.0	40,951	8,142	41,362	289	29,378	71.0
Naval Architecture	1,218	12.0	37,238	1,159	37,767	59	26,844	71.1
Ship Surveying	119	12.0	32,820	119	32,820			
Mining Engineering	474	12.0	38,616	466	38,877	8	23,378	60.1
Petroleum Engineering	457	13.0	42,280	439	42,823	18	29,034	67.8
Agricultural Engineering	437	11.0	34,608	427	34,909	10	21,728	62.2

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Ceramic Engineering	51	13.0	$41,005	46	$42,271	5	$29,356	69.4
Chemical Engineering	1,651	12.0	34,891	1,481	35,878	170	26,286	73.3
Welding Engineering	105	12.0	33,581	101	33,934	4	24,683	72.7
Industrial Engineering Tech.	2,544	9.0	25,095	2,272	25,699	272	20,047	78.0
Industrial Engineering	2,701	12.0	33,377	2,540	33,927	161	24,691	72.8
Engineering & Architecture Student Trainee	1,733	4.0	12,390	1,309	12,532	424	11,953	95.4
General Physical Science	4,981	13.0	44,595	4,552	45,732	429	32,524	71.1
Health Physics	570	13.0	37,513	508	38,549	62	29,018	75.3
Physics	4,372	13.0	41,791	4,191	42,211	181	32,056	75.9
Physical Science Technician	3,908	7.0	20,203	2,962	21,196	946	17,095	80.7
Geophysics	557	13.0	38,851	528	39,563	29	25,899	65.5
Hydrology	2,147	12.0	34,394	2,009	34,977	138	25,908	74.1
Hydrologic Technician	1,375	8.0	21,251	1,184	21,949	191	16,922	77.1
Chemistry	7,777	12.0	35,457	6,204	37,014	1,573	29,312	79.2
Metallurgy	521	12.0	39,103	498	39,445	23	31,700	80.4
Astronomy & Space Science	546	13.0	45,661	519	45,897	27	41,138	89.6
Meteorology	2,095	13.0	37,958	1,997	38,425	98	28,442	74.0
Meteorological Technician	2,316	10.0	25,050	2,165	25,424	151	19,679	77.4
Geology	2,444	12.0	36,346	2,159	37,330	285	28,885	77.4
Oceanography	733	12.0	37,038	658	38,031	75	28,327	74.5
Navigational Information	510	11.0	28,177	441	28,659	69	25,095	87.6
Cartography	4,797	11.0	28,517	3,940	29,359	857	24,647	84.0
Cartographic Technician	1,965	7.0	20,702	1,374	21,905	591	17,905	81.7
Geodesy	357	12.0	33,237	321	34,006	36	26,382	77.6
Food Technology	180	12.0	37,199	142	39,460	38	28,751	72.9
Forest Prod. Technology	101	13.0	41,234	97	41,685	4	30,293	72.7
Gen. Fish & Wildlife Admin.	180	14.0	48,908	178	49,025	2	38,546	78.6

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Biological Science	4,613	12.0	$34,190	3,717	$35,718	896	$27,851	78.0
Microbiology	1,780	12.0	33,350	1,117	36,170	663	28,479	78.7
Biological Technician	5,520	7.0	17,764	3,477	18,437	2,043	16,617	90.1
Pharmacology	411	13.0	39,175	321	31,978	90	36,310	90.8
Agricultural Extension	50	14.5	52,070	39	51,777	11	53,108	102.6
Ecology	299	12.0	33,049	255	33,793	44	28,737	85.0
Zoology	130	13.0	39,694	109	40,995	21	32,942	80.4
Physiology	443	13.0	36,952	351	38,546	92	30,871	80.1
Entomology	750	13.0	38,129	713	38,718	37	26,782	69.2
Plant Protection Technician	123	4.0	16,233	98	17,082	25	12,905	75.5
Botany	179	11.0	33,029	122	36,188	57	26,268	72.6
Plant Pathology	312	13.0	40,772	292	41,588	20	28,860	69.4
Plant Physiology	270	13.0	39,070	251	39,712	19	30,588	77.0
Plant Prot. & Quarantine	1,149	9.0	26,272	988	26,995	161	21,832	80.9
Genetics	265	13.0	40,714	237	41,757	28	31,883	76.4
Range Conservation	1,443	9.0	25,356	1,312	25,797	121	20,581	79.8
Range Technician	691	5.0	15,216	604	15,584	87	12,668	81.3
Soil Conservation	4,842	11.0	27,142	4,588	27,574	254	19,336	70.1
Soil Conservation Tech.	2,418	6.0	16,929	2,296	17,112	122	13,481	78.8
Forestry	6,747	11.0	29,820	6,285	30,499	462	20,579	67.5
Forestry Technician	12,238	5.0	16,063	10,476	16,568	1,762	13,060	78.8
Soil Science	1,996	11.0	29,193	1,895	29,615	101	21,269	71.8
Agronomy	364	12.0	34,328	357	34,534	7	23,794	68.9
Agriculture Management	3,733	11.0	24,824	3,361	25,441	372	19,248	75.7
Fishery Biology	1,375	11.0	31,170	1,274	31,792	101	23,327	73.4
Wildlife Refuge Management	521	11.0	27,381	497	27,754	24	19,645	70.8
Wildlife Biology	1,449	11.0	28,922	1,264	29,905	185	22,204	74.2
Animal Science	105	13.0	38,286	100	38,883	5	26,342	67.7
Home Economics	44	11.0	29,599	2	46,252	42	28,806	62.3
Biological Science Student Trainee	833	4.0	12,063	506	11,983	327	12,186	101.7

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Computer Operation	10,284	7.0	19,444	5,577	20,643	4,707	18,023	87.3
Computer Specialist	34,760	12.0	32,183	25,056	34,199	9,704	26 976	78.9
Computer Science	1,083	12.0	30,639	779	32,824	304	25,041	76.3
Computer Clerk & Assistant	8,722	5.0	16,900	2,577	18,018	6,145	16,430	91.2
Administrative Officer	8,165	11.0	30,316	3,822	35,846	4,343	25,450	71.0
Program Management	4,898	14.0	51,222	4,403	52,000	495	44,303	85.2
Management Analysis	12,963	11.0	30,817	7,372	33,677	5,591	27,047	80.3
Communications Mangement	2,066	12.0	33,727	1,901	34,343	165	26,625	77.5
Program Analysis	14,366	12.0	35,683	8,523	39,289	5,843	30,423	77.4
Communications Specialist	2,574	11.0	29,382	2,149	30,612	425	23,166	75.7
Operations Research	3,690	13.0	39,840	3,217	41,270	473	30,116	73.0
Mathematics	3,457	12.0	35,613	2,642	37,288	815	30,181	80.9
Mathematics Technician	134	7.0	17,910	41	18,357	93	17,713	96.5
Mathematics Statistician	918	13.0	38,038	726	39,475	192	32,605	82.6
Statistician	2,529	12.0	36,830	1,780	38,863	749	31,999	82.3
Statistical Assistant	2,586	6.0	17,404	330	17,760	2,256	17,352	97.7
Actuary	139	13.0	39,863	111	41,964	28	31,535	75.1
Accounting	13,314	12.0	32,919	10,412	34,625	2,902	26,797	77.4
General Attorney	17,172	14.0	43,995	12,829	45,672	4,343	39,042	85.5
Medical Officer	9,711	15.0	56,002	8,068	56,512	1,643	53,494	94.7
Physician's Assistant	971	11.0	26,576	712	27,126	259	25,063	92.4
Nurse	36,828	9.0	24,613	2,913	23,586	33,915	24,702	104.7
Nurse Anesthetist	476	12.0	36,566	177	36,293	299	36,727	101.2
Nursing Assistant	22,699	4.0	14,521	9,500	14,856	13,199	14,279	96.1

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Health Science	1,409	13.0	$37,613	887	$40,380	522	$32,910	81.5
Medical Technologist	4,697	7.0	20,808	1,504	21,473	3,193	20,945	97.5
Medical Technician	2,586	6.0	16,956	1,104	17,635	1,481	16,450	93.3
Medical Record Technician	2,104	5.0	14,894	258	14,500	1,846	14,949	103.1
Dental Officer	1,008	12.0	52,220	961	53,065	47	34,948	65.9
Dental Assistant	2,946	4.0	14,299	212	14,200	2,734	14,306	100.7
Dental Hygiene	379	6.0	16,464	7	17,751	372	16,439	92.6
Dietitian & Nutritionist	1,444	9.0	25,858	56	30,237	1,388	25,682	84.9
Occupational Therapist	693	9.0	22,820	87	23,387	606	22,739	97.2
Physical Therapist	656	9.0	23,588	214	25,207	442	22,804	90.5
Educational Therapist	105	9.0	22,995	44	23,623	61	22,542	95.4
Optometrist	114	11.0	32,974	104	34,462	10	17,495	50.8
Speech Pathology & Audio.	602	12.0	32,268	308	35,163	294	29,235	83.1
Orthotist & Prosthetist	239	9.0	22,937	230	23,097	9	18,852	81.6
Podiatrist	120	11.0	30,403	106	31,649	14	20,969	66.3
Pharmacist	3,050	11.0	27,971	2,280	28,697	770	25,820	90.0
Pharmacy Technician	2,017	5.0	14,360	867	14,537	1,150	14,227	97.9
Veterinary Med. Science	2,039	12.0	37,472	1,931	37,729	108	32,872	87.1
Industrial Hygiene	893	12.0	30,835	740	31,768	153	26,326	82.9
Consumer Safety	1,565	12.0	36,016	1,281	37,134	284	30,974	83.4
Environ. Health Tech.	133	7.0	18,316	114	18,987	19	14,290	75.3
Health System Admin.	520	14.0	48,200	459	49,914	61	35,306	70.7
Health System Specialist	642	12.0	34,374	482	35,919	160	29,717	82.7
Public Health Program Specialist	1,249	12.0	34,849	940	37,149	309	27,851	75.0
Animal Health Technician	690	7.0	20,662	651	20,850	39	17,258	82.8

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1983.

TABLE 166 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1983

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Social Science	2,588	12.0	$37,105	1,714	$38,789	874	$33,801	87.1
Social Science Aid & Tech.	769	7.0	18,902	419	20,525	350	16,958	82.6
Economist	5,425	13.0	39,363	4,415	40,706	1,010	33,493	82.3
Economics Assistant	72	7.0	19,211	19	19,821	53	18,992	95.8
Social Work	3,704	11.0	29,653	2,039	30,567	1,665	28,534	93.3
Social Services	529	8.0	21,000	197	22,476	332	20,123	89.5
Sociology	96	12.0	35,089	62	37,972	34	29,832	78.6
Foreign Affairs	4,033	14.0	43,414	3,269	45,572	764	34,179	75.0
International Relations	60	14.0	48,701	52	50,199	8	38,963	77.6
Manpower Res. & Analysis	45	14.0	46,144	29	48,102	16	42,595	88.6
Manpower Development	891	13.0	40,624	642	42,912	249	34,726	80.9
Geography	200	12.0	32,991	155	34,510	45	27,760	80.4
Equal Employment Oppor.	1,868	12.0	31,925	849	34,856	1,019	29,483	84.6
History	596	12.0	33,802	482	34,914	114	29,101	83.4
Psychology	3,358	13.0	37,992	2,724	39,307	634	32,341	82.3
Psychology Aid & Tech.	660	7.0	18,528	369	18,963	291	17,977	94.8
General Anthropology	60	13.0	41,213	48	43,488	12	32,112	73.8
Archeology	531	11.0	26,800	374	27,917	157	24,139	86.5
Secretary	91,489	5.0	16,515	929	15,294	90,560	16,527	108.1

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1984.

TABLE 167

COMPARISON OF AVERAGE ANNUAL SALARIES IN PRIVATE INDUSTRY WITH SALARY RATES FOR FEDERAL EMPLOYEES UNDER THE GENERAL SCHEDULE, March 1984

OCCUPATION AND LEVEL*	Salaries in Indus.	Grade	SALARY RATES UNDER THE GENERAL SCHEDULE										
			1	2	3	4	5	6	7	8	9	10	Average Salary**
Programmers/Programmer Analysts I	$19,801	GS-5	$13,903	$14,366	$14,829	$15,292	$15,755	$16,218	$16,681	$17,144	$17,607	$18,070	$15,759
Accountants I	19,843												
Chemists I	21,609												
Computer Operators II	16,337												
Engineers I	26,163												
Engineering Technicians III	22,351												
Drafters IV	23,067												
Programmers/Programmer Analysts II	22,815	GS-7	17,221	17,795	18,369	18,943	19,517	20,091	20,665	21,239	21,813	22,387	19,551
Accountants II	24,325												
Chemists II	25,481												
Computer Operators IV	23,107												
Engineers II	28,899												
Engineering Technicians IV	26,362												
Drafters V	29,057												
Programmers/Programmer Analysts III	27,158	GS-9	21,066	21,768	22,470	23,172	23,874	24,567	25,278	25,980	26,682	27,384	23,666
Accountants III	30,209												
Attorneys I	28,918												
Chemists III	30,441												
Systems Analysts I	27,084												
Engineers III	32,761												
Engineering Technicians V	30,084												
Programmers/Programmer Analysts IV	31,929	GS-11	25,489	26,339	27,189	28,039	28,889	29,739	30,589	31,439	32,289	33,139	28,760
Accountants IV	35,715												
Attorneys II	35,238												
Chemists IV	37,643												
Systems Analyst II	32,324												
Engineers IV	39,055												
Programmers/Programmer Analysts V	38,868	GS-12	30,549	31,567	32,585	33,603	34,621	35,639	36,657	37,675	38,693	39,711	34,868
Accountants V	44,466												
Attorneys III	44,743												
Chemists V	45,614												
Systems Analyst III	38,057												
Engineers V	46,349												
Accountants VI	55,618	GS-13	36,327	37,538	38,749	39,960	41,171	42,382	43,593	44,804	46,015	47,226	41,957
Attorneys IV	55,462												
Chemists VI	54,163												
Systems Analyst IV	44,748												
Engineers VI	53,749												
Attorneys V	70,478	GS-14	42,928	44,359	45,790	47,221	48,652	50,083	51,514	52,945	54,376	55,807	49,777
Chemists VII	63,072												
Systems Analyst V	53,917												
Engineers VII	61,166												
Attorneys VI	87,568	GS-15	50,495	52,178	53,861	55,544	57,277	58,910	60,593	62,276	63,959	65,642	70,788
Engineers VIII	70,788												

* See Original Survey for definition of levels.

** Mean salary of all general schedule employees in each grade as of March 31, 1984.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 168

NUMBER AND MEDIAN ANNUAL SALARIES OF CIVILIAN DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY THE FEDERAL GOVERNMENT BY FIELD, 1979-83

FIELD	1979				1981				1983			
	Number	%	Percent of total employed	Median annual salary	Number	%	Percent of total employed	Median annual salary	Number	%	Percent of total employed	Median annual salary
TOTAL	**23,946**	**100.0**	**7.6**	**$33,400**	**25,124**	**100.0**	**7.3**	**$40,300**	**25,793**	**100.0**	**7.0**	**$44,700**
PHYSICIAL SCIENTISTS	**4,598**	**19.2**	**7.6**	**33,200**	**4,342**	**17.3**	**6.9**	**40,100**	**4,307**	**16.7**	**6.7**	**44,300**
Chemists	2,117	8.8	5.3	33,900	2,132	8.5	5.1	39,100	2,054	8.0	5.0	42,900
Physicists/Astronomers	2,481	10.4	12.1	33,300	2,210	8.8	10.4	42,200	2,253	8.7	9.9	45,700
MATHEMATICAL SCIENTISTS	**817**	**3.4**	**5.4**	**36,300**	**852**	**3.4**	**5.5**	**40,200**	**790**	**3.1**	**4.8**	**45,500**
Mathematicians	575	2.4	4.5	38,500	553	2.2	4.2	40,800	499	1.9	3.7	44,600
Statisticians	242	1.0	10.1		299	1.2	11.7	39,200	291	1.1	10.4	46,700
COMPUTER/INFO. SPECIALISTS	**336**	**1.4**	**5.0**		**355**	**1.4**	**3.9**	**38,700**	**490**	**1.9**	**4.0**	**45,900**
ENVIRONMENTAL SCIENTISTS	**2,716**	**11.3**	**18.6**	**35,300**	**3,075**	**12.2**	**19.3**	**40,700**	**3,102**	**12.0**	**18.8**	**45,900**
Earth Scientists	1,829	7.6	16.5	36,000	2,066	8.2	17.2	40,900	2,176	8.4	17.4	46,100
Oceanographers	387	1.6	23.3	32,400	367	1.5	20.5	40,200	274	1.1	15.7	41,500
Atmospheric Scientists	500	2.1	27.3	35,400	642	2.6	30.2	41,200	652	2.5	29.6	48,000
ENGINEERS	**3,571**	**14.9**	**7.1**	**35,200**	**3,802**	**15.1**	**6.7**	**42,600**	**3,843**	**14.9**	**6.2**	**46,500**
LIFE SCIENTISTS	**7,167**	**29.9**	**9.1**	**31,800**	**7,225**	**28.8**	**8.5**	**38,100**	**7,771**	**30.1**	**8.4**	**42,700**
Biological Scientists	3,935	16.4	8.6	30,900	4,149	16.5	8.4	37,600	4,622	17.9	8.4	42,000
Agricultural Scientists	2,116	8.8	16.5	32,400	2,053	8.2	15.2	38,100	2,036	7.9	14.0	43,400
Medical Scientists	1,116	4.7	5.5	35,600	1,023	4.1	4.7	41,100	1,113	4.3	4.8	49,000
SOCIAL SCIENTISTS	**3,661**	**15.3**	**7.3**	**34,700**	**4,261**	**17.0**	**7.7**	**43,900**	**4,299**	**16.7**	**7.2**	**45,600**
Economists	1,618	6.8	11.6	37,400	1,649	6.6	10.3	45,600	1,692	6.6	10.0	48,900
Soc./Anthropologists	121	0.5	1.2		301	1.2	2.7		121	0.5	1.0	
Other Social Scientists	1,922	8.0	7.3	32,700	2,311	9.2	8.1	44,100	2,486	9.6	8.2	44,700

NOTE: Percents may not add to 100 because of rounding. Median salaries computed for full-time civilians only. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: American Chemical Society, Salaries 1985 - An Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985.

TABLE 169

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS* IN GOVENMENT BY WORK FUNCTION AND DEGREE LEVEL, 1985

WORK FUNCTION	BACHELOR'S		MASTER'S		Ph.D.	
	Median	Mean	Median	Mean	Median	Mean
Management- - R&D	$48,600	$50,345	$49,000	$51,033	$57,800	$58,966
Basic Research	34,100	33,213	36,800	36,918	46,100	47,320
Applied R&D	36,000	36,591	40,000	39,920	45,000	46,422
General Management	39,000	39,746	41,900	43,199	46,500	49,559
Marketing	29,000	36,708	**	**	46,600	44,114
Prod. Quality & Control	28,000	27,816	28,300	29,777	35,800	38,214
Forensic	26,000	27,223	30,000	31,686	33,200	34,845
Writing/Editing	38,250	36,200	39,000	37,280	40,000	43,067
Data Processing	30,500	31,513	**	**	**	**
Consulting	30,000	30,138	25,000	31,540	48,000	48,862
Other	30,000	31,389	31,600	32,323	43,000	41,993
All Functions	**31,500**	**33,288**	**35,800**	**37,455**	**47,000**	**48,668**

* Includes only members of the American Chemical Society.
**Less than five respondents.

FACULTY SALARIES

The only national faculty salary survey that presents data by discipline as well as rank and control is conducted by the **College and University Personnel Association.** Data are collected separately for faculty employed in public and private institutions. The **1984-85 NATIONAL FACULTY SALARY SURVEY BY DISCIPLINE AND RANK IN STATE COLLEGES AND UNIVERSITIES** presents data on 46 disciplines from 272 public institutions employing 60,831 faculty members. The **1984-85 NATIONAL FACULTY SALARY SURVEY BY DISCIPLINE AND RANK IN PRIVATE COLLEGES AND UNIVERSITIES** presents data on 46 disciplines from 451 private institutions employing 42,568 faculty members.

Persons hired in fall 1984 as new assistant professors earn substantially more than the average for all newly hired assistant professors if they are in fields where academe is competing for talent with private industry. In accounting, for example, newly hired assistant professors at public institutions are earning $29,547 - 25% more than the average of $23,590 for all disciplines combined. In engineering, new assistant professors at public institutions are earning $28,904, 23% more than the overall average. At private institutions, the pattern is similar, although new assistant professors, on average, earn less than their counterparts at public institutions. New assistant professors in engineering at private institutions average $30,309 - 33% more than the average of $22,705 for all disciplines combined. In contrast, new assistant professors in the biological sciences at private institutions are earning $20,803 - 8.4% less than the overall average. The highest average salary for all ranks combined is in engineering both in public and private institutions. Average faculty salaries by rank and discipline in public and private institutions are reported in Tables 170 and 171.

Nearly half of all faculty members taught summer school in 1984, earning an average of $3,900 (13% of the nine-month salary for academic year 1984-85), according to a survey of 1,866 faculty members at all types of institutions except law and medical schools, private two-year institutions, proprietary institutions and colleges with fewer than 500 students which was conducted for **THE CHRONICLE OF HIGHER EDUCATION** by **John Minter Associates.**

By rank, full professors earned an average of $4,800 from summer teaching, while associate and assistant professors' summer earnings averaged $3,700 and $3,200, respectively. The disciplines with the most faculty members teaching in summer 1984 were business and economics and physical education where about six in ten professors taught. However, faculty members in engineering and computer science had the highest average earnings and those in vocational education the lowest at every rank (Table 172).

In general, faculty members at public colleges and universities were more likely to teach summer school than were their colleagues at private institutions and those who taught had higher average earnings (Table 173)

The survey also gathered information on "outside" earnings from professional work, such as consulting, paid research, and publishing. By discipline, engineering faculty not only were more likely to have outside earnings, but also reported the highest average earnings ($10,900) compared to faculty in fine and applied arts who reported an average of $5,500 in outside earnings (Table 174).

Faculty salaries increased about 6% for the 1983-84 academic year according to a sample survey for **THE CHRONICLE OF HIGHER EDUCATION** by **John Minter Associates.** Engineering faculty recorded not only the highest salaries at all ranks and at all types of institutions, except public two-year schools, but also the highest percentage increases.

Physical education faculty received the lowest salaries at every rank and at every type of institution with the exception of public two year schools where they had the highest salary, and received the least increase (Tables 175 and 176).

Female faculty members at colleges and universities received slightly larger average salary increases, in percentage terms,than males - 6.2% compared with 6% - but still earned 18% less than men - $23,855 compared with $29,015. On average, men earned more than women in all eight disciplinary categories included in the **CHRONICLE** Survey. The largest gap is in engineering and computer science, where men are earning $9,000 (35%) more than women. However, women in engineering departments have the highest average salary among women in any of the disciplines - $25,948. The lowest average earnings of women are in fine and applied arts (Table 177). Women also earned less than their male colleagues at all types of institutions (Table 178).

Faculty salaries are up 6.6% in 1984-85 and the average faculty member is making $30,960, according to the **ANNUAL REPORT ON THE ECONOMIC STATUS OF THE PROFESSION** by the **American Association of University Professors.** After taking inflation into account, the increase is about 2.5% - the largest rise since the 1960's. For the first time since 1979-80, the increases at public institutions equaled or topped those at private institutions. Salaries are up an average of 6.9% at public institutions, compared with 6% at independent private institutions and 5.8% at church-related colleges. Although increases were greater at public institutions, faculty members are still making less, on the average, than their colleagues at independent private institutions (Table 179). Average compensation of faculty by rank and type of affiliation is compared in Table 180.

Regardless of type of affiliation, type of institution, or rank, women consistently earn less than their male counterparts as shown in Table 181. For example male professors at doctoral institutions (Category I) earned an average $44,430, while female professors earned $39,600 or 10.9% less. One explanation for the salary disparity between the sexes is that women faculty tend to be concentrated in lower-paid disciplines.

Faculty salaries vary geographically as shown in Table 182. Faculty in doctoral institutions (Category 1) earned the most in the New England area followed closely by those in the Pacific region and earned the least in the East South Central region.

For the average faculty member, the value of fringe benefits totaled about 22% of salary. Overall, 65% of faculty members have tenure as shown in Table 183.

Faculty members in medical schools continue to receive much higher salaries than do other faculty regardless of rank or type of institution. For example, the average salary for medical school faculty was $42,320 compared to $30,960 for all faculty. Faculty earned more in private medical schools than in public ones at all ranks (Table 184).

The **National Science Foundation** reports in its **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES 1983** that among doctoral scientists and engineers working for educational institutions, engineers earned the highest median salaries ($42,500) while doctoral oceanographers were paid the lowest ($31,700). Among all employed doctoral engineers, only 33.1% worked for educational institutions (the lowest proportion of any field) compared with 86.0% of doctoral sociologists/anthropologists who were employed by educational institutions. Table 185 compares the median salaries of doctoral scientists and engineers employed by educational institutions from 1979 through 1983.

Among doctoral scientists and engineers employed by educational institutions who are college or university teachers, engineers again reported the highest salaries regardless of academic rank or length of contract (Table 186).

The **American Chemical Society's SALARIES 1985** found that chemists employed in colleges and universities earn less than those employed in other sectors of the economy. Overall, those chemists engaged in administration as their primary work activity reported higher salaries while those employed in teaching reported the lowest (Table 187). As shown in Table 188, Ph.D. chemists employed at least one-half time in teaching found their salaries increasing with years since their first degree regardless of academic rank.

By type of academic institution, Ph.D. chemists employed in medical/professional schools reported the highest median salaries regardless of academic rank, while those doctoral chemists employed in institutions which grant the baccalaureate as the highest degree earned the least (Table 189).

By chemical specialty, polymer chemists employed in colleges and universities generally reported the highest salaries while general chemists reported the lowest. Highest median salary was reported by Ph.D. professors whose specialty was pharmaceutical chemistry at $50,000 (Table 190).

As was true in other employment sectors, women Ph.D. chemists employed in academic institutions reported lower salaries than their male cohorts regardless of academic rank. Male chemistry professors reported a median salary of $44,611 compared to $42,778 for female chemistry professors (Table 191).

The 28th annual survey of faculty salaries and tenure by the **American Mathematical Society** is based on returns from 675 departments in the mathematical sciences, 101 of which did not contain usable salary information. Table 192 shows that doctoral mathematics teachers employed in doctorate granting departments earn more than those employed in non-doctorate granting departments. Additionally, the more prestigious the doctoral granting department, generally the higher salaries paid the faculty. As expected, non-doctoral degree matheamtics teachers earn less than those with a doctorate regardless of type of institution (Table 193).

The median salary for physicists at most ranks increased by nearly 7% between 1982 and 1983, according to the **American Institute of Physics' 1983 SALARIES, SOCIETY MEMBERSHIP SURVEY.** Table 194 presents university salaries for physicists by academic rank and salary base for 1983.

The annual **1984-85 FACULTY SALARIES IN GRADUATE DEPARTMENTS OF PSYCHOLOGY** conducted by the **American Psychological Association** and the **Council of Graduate Departments of Psychology** reports on data submitted by 379 departments covering 6,503 full-time faculty. Generally, faculty in doctoral departments in the Middle-Atlantic states reported the highest salaries regardless of rank or length of experience. Average salaries ranged from a high of $51,577 for full professors with at least 12 years of experience working in the Middle Atlantic area to a low of $20,500 for lecturers/instructors with less than two years of experience working in the New England area (Table 195). Similar information is presented for full-time faculty in U.S. master's departments of psychology in Table 196.

Type of psychology department also affected level of salary as shown in Table 197. However, no one type of department consistently paid higher or lower salaries.

Average salaries ranged from a high of $47,485 for full professors with at least 12 years of experience in human development departments to a low of $20,750 for lecturers/instructors with less than two years of experience, also in human development departments (Table 197). By employment setting, medical school psychiatry departments consistently pay the highest salaries to professors and associate professors (Table 198). As expected, the longer in rank, the higher the salary as shown in Table 199.

The **American Geological Institute** in its **SURVEY OF FACULTY SALARIES - 1985** received responses from 105 departments of geology representing about one sixth of all such departments. Information from that survey is summarized in Table 200. Respondents to the survey also indicated that faculty salaries would increase 5.9% in the next academic year.

The median salary paid to all engineers in education increased 7.0% from the 1983 figure of $32,900 to the 1984 average of $35,200, according to the eighteenth survey report on **SALARIES OF ENGINEERS IN EDUCATION 1984** by the **Engineering Manpower Commission** of the **American Association of Engineering Societies.** The 1984 median salary of engineers employed by engineering schools was $35,800. Those on 9-10 month contracts received median salaries of $35,250, and engineers on 11-12 month contracts received a median of $40,100 per year. At the top rank, the median salary of a professor in an engineering school on a 9-10 month contract increased 7.4%, from $39,450 in 1983 to $42,350 in 1984. Those on 11-12 month contracts increased 8.7%.

Median salaries for associate professors in engineering schools on 9-10 month contracts rose 6.9% from $31,100 in 1983 to $33,250 in 1984, compared to a 5.9% increase to $42,400 for associate professors on 11-12 month contracts. Tables 201 and 202 present median salaries in all engineering schools by rank and years since baccalaureate for faculty on 9-10 and 11-12 month contracts respectively.

Faculty in technology schools earn lower salaries than do those in engineering schools regardless of rank or years since baccalaureate as shown in Table 203. Type of institution also affects salary, with the highest salaries earned by faculty in engineering schools granting the doctoral degree (Table 204).

Overall, faculty salaries in pharmacy rose by 6.8% from 1983-84 to 1984-85, according to the **ANNUAL SURVEY OF FACULTY SALARIES** BY THE **American Association of Colleges of Pharmacy.** Salaries for pharmacy faculty have grown faster from 1983-84 to 1984-85 than the Consumer Price Index (6.8% versus 4.2%). Generally, senior faculty and administrators in departments of pharmacy/pharmaceutics reported the highest average salaries (Table 205). Salaries ranged from a high of $66,288 for deans in colleges of pharmacy with 16-20 years of experience to a low of $25,302 for instructors with less than one year of experience (Table 206).

The average salary of profesors in business schools rose to $43,500, according to the 17th annual **1984-85 SALARY SURVEY** conducted by the **American Assembly of Collegiate Schools of Business.** The survey includes salary data from 436 institutions covering over 20,000 faculty members and 2,000 administrators. Topping the salary schedule are professors of policy/control at $48,800. At the other end of the scale were instructors in business education at $19,500 (Table 207).

Administrative personnel in business schools earn higher salaries than do faculty. Administrators in accredited institutions earn higher salaries than do their counterparts in nonaccredited schools. Salaries by type of institution for administrative personnel in business schools are reported in Table 208.

Women comprise approximately 14.2% of the faculty at AACSB Accredited institutions and 20% of the faculty at non-accredited institutions. New women doctorates received salaries that averaged 97.2% of the salaries paid to all new doctorates and women ABDs received salaries that averaged 97.3%. Overall, regardless of type of institution, salary averages for women were below those for all faculty (Table 209).

Salary increases for college administrators have out-distanced the rate of inflation for the year, according to the eighth annual **1984-85 ADMINISTRATIVE COMPENSATION SURVEY** by the **College and University Personnel Association.** The survey reported on information from 1,596 higher education institutions. Overall, the median salaries for administrators at all types of institutions increased 6% at the beginning of the 1984-85 academic year compared with a 4.2% rise in the cost of living index. At public institutions, average salaries increased 6.5% this academic year compared with 4.4% at private institutions.

The greatest salary increases for the 1984-85 academic year were in professional schools with the chief health professions officer showing an increase of 19.3%. Deans of agriculture were up 12%, deans of architecture 10.5%, and deans of engineering 8.7%. As in previous years, heading the salary list is the dean of medicine with a median salary of $99,953, followed by the dean of dentistry at $80,942. However, deans of medicine received increases of only 2% while deans of dentistry registered a gain of 8.2% (Table 210).

Regardless of position, women receive lower salaries than men in similar positions. Some of this discrepancy can be explained by the fact that women's average years of service in their present position is 36.5% lower than men's. Median salaries for minority incumbents averaged 11.4% less than for non-minority incumbents. However, the average years of service in their present position is 12.6% lower for minority administrators compared to their non-minority counterparts. Median salaries paid to administrative officers by position, minority/non-minority status and sex are shown in Table 211.

The **National Education Association** in its **ESTIMATES OF SCHOOL STATISTICS** collects data on average annual salaries of instructional staff and classroom teachers, at both the elementary and secondary school level. In its 1984-85 report, NEA estimates that the average classroom teacher salary increased 7.3% over the 1983-84 level to $23,546 from $21,935. As in previous years, regardless of school level, both instructional staff and classroom teachers were paid the highest salaries in Alaska and the lowest in Mississippi (Table 212).

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in State Colleges and Universities, March 1985.

TABLE 170

AVERAGE FACULTY SALARIES IN STATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1984-85

MAJOR FIELD	RANK											
	Professor		Assoc. Prof.		Asst. Prof.		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
AGRIBUSINESS & AGRIC. PRODUCTION	106	$33,511	91	$28,086	82	$23,798	9	$25,509	28	$16,902	307	$27,793
ARCHITECTURE & ENVIRONMENTAL DESIGN	30	34,527	40	30,463	42	25,345	6	24,877	9	21,578	121	29,033
AREA & ETHNIC STUDIES	53	36,155	72	30,938	59	25,316	12	24,177	7	23,599	191	30,380
LIFE SCIENCES	1,279	35,053	842	28,749	497	23,705	83	22,000	80	19,122	2,698	30,522
BUSINESS & MANAGEMENT	459	38,665	527	32,174	595	27,996	116	28,502	254	21,086	1,835	30,908
Accounting	374	39,844	437	33,290	523	28,355	83	29,547	274	21,632	1,608	31,222
Business Economics	319	38,161	308	31,193	306	26,602	44	26,946	77	20,937	1,010	31,222
Business Mgmt. & Administration	616	38,075	753	31,835	765	27,017	132	27,262	324	20,348	2,458	30,385
Secretarial & Related Programs	105	34,761	130	27,960	163	23,537	10	24,532	68	18,355	466	26,544
COMMUNICATIONS	285	35,044	411	28,584	436	23,560	70	22,975	187	19,046	1,319	26,966
Communication Technologies	30	32,950	35	28,855	41	23,601	3	22,566	22	18,102	128	26,283
COMPUTER & INFORMATION SCIENCE	270	37,912	358	32,860	451	27,747	101	26,985	289	21,716	1,368	29,817
EDUCATION	1,228	35,590	1,012	29,152	682	24,232	79	22,612	141	18,700	3,063	30,156
Curriculum & Instruction	236	35,574	222	29,770	153	24,195	18	23,054	30	19,605	641	30,100
Education Administration	264	35,821	140	29,346	48	23,538	12	22,937	5	18,335	457	32,356
Industrial Arts Education	149	35,557	165	29,001	157	24,887	12	23,719	94	19,896	565	28,071
Physical Education	646	35,004	753	29,014	907	24,596	53	21,604	493	20,189	2,799	27,410
Reading Education	62	34,870	68	27,288	42	23,869			12	18,247	184	28,473
Special Education	276	35,150	283	28,662	252	23,545	34	21,334	42	19,727	853	28,809
Student Counseling & Personnel Serv.	216	35,423	108	28,452	74	23,845	19	22,445	11	20,031	409	31,073
Teacher Education, General Programs	553	34,102	370	28,392	257	23,925	32	21,904	46	18,857	1,226	29,673
ENGINEERING	609	39,321	619	32,643	458	28,572	89	28,904	85	23,341	1,771	33,440
FINE & APPLIED ARTS												
Dramatic Arts	197	36,648	222	27,981	245	22,732	37	22,139	82	18,648	746	27,519
Fine Arts	630	34,175	560	27,344	438	22,937	52	20,960	83	18,926	1,711	28,323
Music	886	34,605	835	28,211	761	22,963	104	21,358	215	19,488	2,697	28,135
Visual & Performing Arts	213	33,826	304	27,727	262	22,886	21	21,498	57	19,807	836	27,223

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in State Colleges and Universities, March 1985.

TABLE 170 (continued)

AVERAGE FACULTY SALARIES IN STATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1984-85

MAJOR FIELD	RANK											
	Professor		Assoc. Prof.		Asst. Prof.		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
FOREIGN LANGUAGES	532	35,691	599	28,709	503	23,517	61	21,042	106	18,925	1,740	28,747
HEALTH PROFESSIONS												
Nursing	146	35,600	490	28,855	1,139	23,634	133	23,188	564	19,684	2,339	24,522
Speech Pathology & Audiology	151	36,519	131	29,093	152	23,938	23	22,491	58	19,872	492	28,692
HOME ECONOMICS	160	35,205	237	28,628	400	23,679	40	22,496	154	19,048	951	26,101
LETTERS	1,357	35,160	1,223	28,361	1,219	22,883	140	20,382	415	17,645	4,214	27,910
Philosophy & Religion	390	35,698	327	28,503	185	22,852	29	21,070	20	19,955	922	30,227
LIBRARY & ARCHIVAL SCIENCES	40	36,326	130	28,616	147	23,736	12	21,545	63	19,253	380	25,987
MATHEMATICS	1,118	36,094	1,131	29,601	1,059	24,538	168	23,556	424	18,398	3,732	28,836
PHYSICAL SCIENCES												
Chemistry, General	947	35,869	477	29,106	325	23,280	58	22,335	53	17,940	1,802	31,281
Geological Sciences	289	36,332	217	28,990	163	24,476	27	24,386	22	19,886	691	30,706
Physical Science	223	34,685	191	28,914	136	23,529	21	22,305	40	17,257	590	29,063
Physics	589	36,532	384	29,530	203	24,715	38	23,169	34	19,411	1,210	31,846
MULTI-INERDISCIPLINARY STUDIES	67	36,236	106	29,607	71	23,508	8	21,751	7	19,189	251	29,360
PSYCHOLOGY	1,104	35,819	932	28,966	560	23,634	89	21,592	48	19,409	2,644	30,524
SOCIAL SCIENCES	319	34,393	379	28,091	298	23,190	39	22,285	47	17,851	1,043	28,156
Anthropology	170	35,461	130	29,378	71	23,633	15	22,308	12	24,486	383	30,859
Geography	584	35,727	460	28,744	317	23,525	48	21,229	41	20,569	1,402	30,233
History	1,256	35,635	690	28,918	327	23,613	31	19,568	37	19,281	2,310	31,664
Sociology	490	36,048	614	28,668	423	23,665	55	22,089	39	18,937	1,566	29,383
ALL DISCIPLINES	20,319	35,840	18,740	29,329	16,554	24,439	2,292	23,590	5,218	19,656	60,831	29,343

*Includes 227 institutions. NOTE: Blanks indicate no respondents.

SOURCE: College and University Personnel Association, 1984-84 National Faculty Salary Survey by Discipline and Rank in Private Colleges and Universities.

TABLE 171

AVERAGE FACULTY SALARIES FOR PRIVATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1984-85

DISCIPLINE/MAJOR FIELD	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
AGRICULTURE & NATURAL RESOURCES	19	$33,084	12	$27,136	23	$22,657	5	$24,590	3	$17,878	57	$26,824
ARCHITECTURE & ENVIRONMENTAL DESIGN	94	39,774	95	30,426	68	24,440	8	23,688	3	17,851	260	32,095
AREA STUDIES	52	42,469	43	31,550	37	24,258	2	19,125	1	18,720	133	33,694
BIOLOGICAL SCIENCES	776	37,268	612	28,705	523	23,695	60	20,803	86	16,300	1,997	30,186
BUSINESS AND MANAGEMENT	401	44,433	522	33,626	583	27,581	99	27,258	156	21,452	1,662	32,970
Accounting	168	40,518	270	32,867	350	26,829	58	27,011	89	20,738	877	30,692
Business Economics	231	39,923	256	30,816	350	25,202	51	24,285	73	19,980	910	30,099
Business Mgmt. & Admin.	293	41,010	461	32,370	546	26,098	82	27,021	138	19,973	1,438	30,559
Secretarial & Related Programs	8	27,070	24	23,724	50	18,729	1	20,836	44	14,998	126	18,907
COMMUNICATIONS	171	33,221	249	27,429	311	21,917	56	20,676	106	17,347	837	25,287
Communication Technologies	11	33,260	15	29,131	57	22,999	17	23,022	19	18,078	102	24,090
COMPUTER & INFORMATION SCI.	184	40,620	253	32,058	427	26,708	82	26,958	154	21,356	1,018	29,742
EDUCATION	469	33,510	548	26,955	462	21,675	40	20,510	121	18,600	1,600	26,720
Curriculum & Instruction	40	36,393	37	28,404	12	25,543	1	16,300	6	19,633	95	30,852
Educa.!on Administration	20	35,948	34	25,332	25	21,583			8	21,347	87	26,329
Physical Education	205	32,154	364	26,389	450	21,740	30	20,302	304	18,518	1,323	23,892
Reading Education	5	28,436	13	26,063	24	19,606	3	18,767	11	14,833	53	21,032
Special Education	35	34,527	68	26,681	49	21,249	6	19,066	28	16,754	180	25,184
Student Counseling & Personnel	24	34,043	26	27,606	23	22,117	4	19,500	5	17,084	78	27,293
Teacher Education, General Programs	130	29,625	159	25,306	138	20,788	11	19,581	38	17,062	465	24,499
ENGINEERING	1,263	47,353	776	35,792	627	30,837	103	30,309	71	22,586	2,737	39,649
FINE & APPLIED ARTS												
Dramatic Arts	134	34,814	152	26,301	212	21,715	28	19,415	70	17,900	568	25,562
Fine Arts	294	33,854	376	26,129	349	21,132	32	19,619	78	17,504	1,097	25,996
Music	526	32,171	527	25,043	521	20,678	43	19,470	138	17,366	1,712	25,285
Visual & Performing Arts	164	34,398	222	26,884	199	22,096	24	21,251	44	17,680	629	26,684
FOREIGN LANGUAGES	543	35,278	658	27,173	631	21,797	90	19,964	138	17,844	1,970	27,031
HEALTH PROFESSIONS												
Nursing	97	33,722	387	26,832	872	21,684	99	21,463	389	17,882	1,745	22,647
Speech Pathology & Audiology	26	35,611	39	28,127	38	22,825	6	22,354	18	19,620	121	26,804

SOURCE: College and University Personnel Association, 1984-85 National Faculty Salary Survey by Discipline and Rank in Private Colleges and Universities.

TABLE 171 (continued)

AVERAGE FACULTY SALARIES FOR PRIVATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1984-85

DISCIPLINE/MAJOR FIELD	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
HOME ECONOMICS	22	$32,652	69	$24,240	109	$20,968	7	$20,975	40	$17,643	240	$22,425
INTERDISCIPLINARY STUDIES	57	35,614	67	28,481	71	23,057	3	24,200	13	19,328	208	28,012
LETTERS	920	34,741	791	26,631	703	21,452	99	19,092	207	17,170	2,621	27,341
Philosophy & Religion	737	33,231	574	26,545	455	21,650	69	19,976	67	17,060	1,833	27,671
LIBRARY AND ARCHIVAL SCIENCES	29	37,202	65	26,911	92	21,240	4	22,284	36	17,100	222	24,314
MATHEMATICS	749	39,125	669	28,166	677	22,891	115	22,579	237	17,886	2,332	29,109
PHYSICAL SCIENCES												
Chemistry	772	38,067	402	27,151	343	22,817	57	22,274	44	16,199	1,561	31,288
Geological Sciences	152	42,398	76	31,330	72	25,024	9	22,222	9	20,537	309	34,990
Physical Science	177	41,927	73	27,559	92	24,756	11	24,621	34	19,764	376	32,932
Physics	623	41,385	272	29,217	223	24,216	36	22,998	34	22,067	1,152	34,618
PSYCHOLOGY	596	36,275	600	27,089	486	21,534	68	20,998	54	16,911	1,736	28,371
SOCIAL SCIENCES	332	40,757	271	27,587	306	23,070	32	21,958	49	16,051	958	30,118
Anthropology	77	40,202	82	29,377	78	23,094	8	21,508	5	15,316	242	30,506
Geography	41	35,263	30	28,892	29	23,142	6	22,500	5	16,708	105	29,211
History	735	35,228	506	27,331	342	21,774	56	20,200	32	17,943	1,615	29,562
Political Science	369	38,281	331	27,989	303	22,262	40	21,172	48	17,847	1,051	29,488
Sociology	299	36,077	365	26,617	340	21,479	32	20,176	61	17,737	1,065	27,124
THEOLOGY	424	32,729	329	27,026	249	21,942	37	20,890	63	17,824	1,065	27,563
ALL DISCIPLINES	13,494	37,715	12,770	28,431	12,927	23,253	1,730	22,705	3,377	18,386	42,568	29,005

* Includes 299 institutions. NOTE: Blanks indicate no respondents.

SOURCE: The Chronicle of Higher Education, July 17, 1985.

TABLE 172

AVERAGE SUMMER SCHOOL EARNINGS ABOVE BASE SALARY, AVERAGE PERCENT OF BASE SALARY AND PROPORTION REPORTING EARNINGS OF FULL-TIME FACULTY MEMBERS BY DISCIPLINE AND RANK, 1984

DISCIPLINE AND RANK	Average Earnings	Avg. of of Base Salary	% Reporting Earnings
ARTS, FINE AND APPLIED			
Professor	$3,700	11%	42%
Associate Professor	3,000	10	56
Assistant Professor	2,200	9	27
BUSINESS & ECONOMICS			
Professor	5,900	15	56
Associate Professor	4,800	15	61
Assistant Professor	4,100	14	60
ENGINEERING & COMP. SCI.			
Professor	7,400	18	34
Associate Professor	6,100	17	51
Assistant Professor	5,300	16	69
HUMANITIES, LANGUAGE, LITERATURE & COMMUNICATIONS			
Professor	3,500	10	48
Associate Professor	3,000	11	53
Assistant Professor	3,200	15	51
PHYSICAL EDUCATION			
Professor	3,300	9	60
Associate Professor	4,000	16	58
Assistant Professor	2,300	10	55
SCIENCE & MATHEMATICS			
Professor	4,600	13	44
Associate Professor	3,800	13	51
Assistant Professor	2,800	12	45
SOCIAL SCIENCES & EDUC.			
Professor	5,600	15	52
Associate Professor	3,500	12	50
Assistant Professor	2,800	13	58
VOCATIONAL EDUCATION*			
Professor	3,100	9	44
Associate Professor	2,700	10	35
Assistant Professor	2,900	12	35

*Includes Home Economics, Health, and Nursing.

SOURCE: The Chronicle of Higher Education, July 17, 1985

TABLE 173

AVERAGE SUMMER-SCHOOL EARNINGS ABOVE BASE SALARY, AVERAGE PERCENT OF BASE SALARY OF FACULTY MEMBERS BY DISCIPLINE AND TYPE OF INSTITUTION, 1984

DISCIPLINE AND TYPE OF INSTITUTION	PUBLIC		PRIVATE	
	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary
ARTS, FINE & APPLIED				
Doctoral Institutions	$3,600	12%	$3,300	11%
Comprehensive Institutions	2,800	11	2,900	9
2 - Year Institutions	2,100	8		
Liberal Arts Institutions			2,500	10
BUSINESS & ECONOMICS				
Doctoral Institutions	7,200	19	3,100	9
Comprehensive Institutions	4,900	15	2,400	8
2 - Year Institutions	2,800	11		
Liberal Arts Institutions			3,300	14
ENGINEERING & COMPUTER SCI.				
Doctoral Institutions	7,800	20	4,300	10
Comprehensive Institutions	6,800	19	3,400	11
2 - Year Institutions	2,800	9		
Liberal Arts Institutions			3,100	11
HUMANITIES, LANGUAGE, LIT. & COMMUNICATIONS				
Doctoral Institutions	4,200	13	2,500	9
Comprehensive Institutions	3,800	14	1,800	7
2 - Year Institutions	3,200	11		
Liberal Arts Institutions			1,600	6
PHYSICAL EDUCATION				
Doctoral Institutions	4,000	14	2,300	6
Comprehensive Institutions	2,400	9	4,500	22
2 - Year Institutions	1,600	5		
Liberal Arts Institutions			3,500	12
SCIENCE & MATHEMATICS				
Doctoral Institutions	4,600	14	3,800	13
Comprehensive Institutions	4,200	14	2,800	11
2 - Year Institutions	3,100	11		
Liberal Arts Institutions			2,200	9
SOCIAL SCIENCES & EDUC.				
Doctoral Institutions	5,000	16	3,500	11
Comprehensive Institutions	4,000	13	3,100	11
2 - Year Institutions	3,700	12		
Liberal Arts Institutions				
VOCATIONAL EDUCATION*				
Doctoral Institutions	2,900	9	2,400	9
Comprehensive Institutions	3,600	14	3,600	16
2 - Year Institutions	2,500	10		
Liberal Arts Institutions			1,200	6

*Includes Home Economics, Health and Nursing.

SOURCE: The Chronicle of Higher Education, March 7, 1984 and July 17, 1985

TABLE 174

AVERAGE ANNUAL OUTSIDE EARNINGS AND PROPORTION REPORTING EARNINGS OF FACULTY MEMBERS BY DISCIPLINE, 1984

DISCIPLINE	AVERAGE AMOUNT OF EARNINGS	% REPORTING EARNINGS
Arts, Fine & Applied	$5,500	69%
Business & Economics	8,000	69
Engineering & Computer Science	10,900	78
Humanities, Language Literature & Communications	4,000	58
Physical Education	4,700	55
Science & Mathematics	6,600	59
Social Sciences	6,100	69
Vocational Education, Home Economics, Health & Nursing	6,200	55

TABLE 175

AVERAGE SALARIES AND PERCENT INCREASE OF FACULTY MEMBERS ON NINE MONTH CONTRACTS IN ALL INSTITUTIONS BY DISCIPLINE AND RANK, 1983-84

ACADEMIC DISCIPLINE	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		ALL RANKS	
	SALARY	% INCREASE	SALARY	% INCREASE	SALARY	% INCREASE	SALARY	% INCREASE
Arts, Fine & Applied	$31,732	6.3%	$27,038	6.7%	$20,907	7.2%	$26,189	6.6%
Business and Economics	36,175	4.7	28,889	7.1	24,212	6.4	29,020	5.8
Engineering and Comp. Sci.	40,929	7.5	31,920	8.7	27,697	7.2	35,391	7.6
Humanities, Language, Literature, Communications	33,568	6.1	24,821	6.2	20,458	6.6	27,112	6.2
Physical Education	31,672	4.6	24,518	5.5	22,306	6.2	25,151	5.5
Science and Mathematics	35,631	5.9	26,055	5.8	21,182	6.4	28,720	6.0
Social Sciences	34,182	5.2	25,475	5.8	21,363	6.4	27,892	5.6
Vocational Education, Home Economics, Nursing and Health	32,482	5.4	29,004	5.9	21,942	6.2	26,173	6.0

SOURCE: The Chronicle of Higher Education, March 7, 1984 and March 28, 1984

TABLE 176

AVERAGE SALARIES OF FACULTY MEMBERS (ALL RANKS COMBINED) BY FIELD AND TYPE OF INSTITUTION, 1983-84

FIELD	TYPE OF INSTITUTION				
	ALL INSTITUTIONS	ALL PUBLIC	4-YEAR PUBLIC	4-YEAR PRIVATE	2-YEAR PUBLIC
Arts, Fine and Applied	$26,189	$27,646	$28,102	$25,207	$26,071
Business and Economics	29,020	30,495	32,652	27,041	25,323
Engineering and Computer Science	35,391	35,015	36,787	36,282	26,340
Humanities, Language, Literature, Communications	27,112	28,457	29,226	26,083	26,142
Physical Education	25,151	27,983	27,820	21,948	28,487
Science and Mathematics	28,720	30,275	31,339	26,902	25,668
Social Sciences	27,892	29,560	29,474	26,086	26,575
Vocational Education, Home Economics, Nursing and Health	26,173	26,566	27,611	24,891	25,186

TABLE 177

AVERAGE SALARIES AND % INCREASE OF FACULTY MEMBERS BY DISCIPLINE AND SEX, 1983-84

DISCIPLINE	MEN		WOMEN	
	Salary	% Increase*	Salary	% Increase*
Arts, Fine and Applied	$26,896	6.6%	$22,470	5.9%
Business and Economics	29,768	5.7	23,673	6.4
Engineering & Computer Science	35,028	7.5	25,948	4.0
Humanities, Language, Literature & Communications	28,226	6.0	23,928	7.7
Physical Education	26,359	5.7	22,599	5.5
Science & Mathematics	29,742	5.6	22,500	5.6
Social Sciences	28,670	5.5	24,978	5.7
Vocational Education, Home Economics, Nursing & Health	27,184	5.0	24,353	6.6

* Increase of average salary for 1983-84 over average for 1982, and the women's rate of increase as a percentage of men's rate.

TABLE 178

FACULTY SALARIES BY TYPE OF INSTITUTION, CONTROL AND SEX, 1983-84

TYPE OF INSTITUTION	CONTROL					
	PUBLIC INSTITUTIONS			PRIVATE INSTITUTIONS		
	MEN	WOMEN	WOMEN'S AS % OF MEN'S	MEN	WOMEN	WOMEN'S AS % OF MEN'S
Ph.D.-Granting Institutions	$33,289	$27,357	82.2	$35,537	$29,817	83.9
Comprehensive Institutions*	29,769	24,542	82.4	26,944	21,833	81.0
Institutions Granting Bachelor's Degree Only				23,545	20,274	86.1
Two-Year Colleges	26,514	24,271	91.5			
All Institutions	30,168	25,211	83.6	27,504	22,460	81.7

*Institutions with more than 1,500 students, a liberal arts program, and at least one professional program.

SOURCE: American Association of University Professors, The Annual Report of the Economic Status of the Profession, 1984-85, Special Issue.

TABLE 179

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, TYPE OF INSTITUTION (CATEGORY*) AND TYPE OF AFFILIATION, 1984-85

	ALL COMBINED		PUBLIC		PRIVATE INDEP.		CHURCH-RELATED	
ACADEMIC RANK	Average Salary	% Incr. over 1983-84	Average Salary	% Incr. over 1983-84	Average Salary	% Incr. over 1983-84	Average Salary	% Incr. over 1983-84
CATEGORY I								
Professor	$44,100	6.5	$42,560	6.6	$49,880	6.1	$44,710	7.1
Associate Professor	31,910	6.3	31,370	6.4	34,130	5.5	33,270	6.6
Assistant Professor	26,480	6.7	26,100	6.9	27,840	6.1	27,200	7.0
Instructor	19,790	6.0	19,330	6.4	21,760	4.2	22,110	5.4
Lecturer	23,030	6.9	22,880	7.1	23,560	5.8	24,360	10.9
All Ranks	34,830	6.5	33,860	6.6	39,020	6.1	34,640	6.9
CATEGORY II-A								
Professor	37,190	7.6	37,090	8.0	37,980	6.2	37,110	5.7
Associate Professor	29,590	6.9	29,620	7.3	29,730	5.9	29,190	5.3
Assistant Professor	24,320	6.7	24,420	7.1	23,890	5.9	24,130	5.2
Instructor	19,370	6.7	19,640	7.0	17,810	5.2	19,170	6.1
Lecturer	20,360	6.8	19,900	6.8	22,380	5.6	23,170	11.4
All Ranks	29,770	7.2	29,930	7.5	29,200	6.0	23,170	5.5
CATEGORY II-B								
Professor	32,830	6.2	33,850	7.9	36,500	5.7	29,510	5.4
Associate Professor	26,230	6.2	28,160	7.6	27,670	6.0	24,130	5.4
Assistant Professor	21,850	6.1	23,540	7.3	22,530	5.8	20,350	5.5
Instructor	17,840	6.4	19,000	7.0	18,330	5.8	16,940	6.1
Lecturer	20,690	8.2	21,080	8.4	22,230	7.5	16,430	6.4
All Ranks	25,600	6.2	26,880	7.6	27,790	5.8	23,360	5.5
CATEGORY II-C								
Professor	35,920	5.8	40,860	5.5	37,840	6.1	25,850	6.0
Associate Professor	29,410	6.6	31,670	6.8	29,620	6.7	22,890	5.2
Assistant Professor	25,240	6.7	27,570	7.5	25,240	6.2	19,480	6.0
Instructor	19,890	5.7	21,720	6.1	19,940	5.5	16,030	4.6
Lecturer	23,030	11.2	23,250	12.2	22,680	8.0	**	**
All Ranks	28,860	6.3	32,520	6.4	28,450	6.3	22,470	5.8
CATEGORY III								
Professor	32,880	6.1	33,230	6.1	24,680	3.7	21,290	4.1
Associate Professor	27,950	5.8	28,200	5.8	22,970	4.9	18,300	6.4
Assistant Professor	23,370	5.9	23,630	5.9	19,320	6.8	17,630	3.1
Instructor	19,340	5.4	19,630	5.5	15,560	4.7	15,210	2.8
Lecturer	17,730	7.4	18,070	7.3	11,370	9.1	**	**
All Ranks	26,120	5.9	26,460	5.9	20,370	5.1	17,440	3.9
CATEGORY IV								
No Rank	24,550	5.8	24,830	5.8	16,240	6.2	18,010	6.1

*See original survey for definition of categories. **Too few individuals to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Profession, 1984-85, Special Issue.

TABLE 180

WEIGHTED AVERAGE COMPENSATION OF FACULTY BY ACADEMIC RANK, CATEGORY* AND TYPE OF AFFILIATION, 1984-85

ACADEMIC RANK	ALL COMBINED Average Compensation	PUBLIC Average Compensation	PRIVATE INDEPENDENT Average Compensation	CHURCH-RELATED Average Compensation
CATEGORY I				
Professor	$53,260	$51,200	$60,950	$54,330
Assoc. Professor	38,940	38,200	41,960	40,880
Ass't. Professor	32,310	31,880	33,870	33,030
Instructor	24,290	23,790	26,610	26,400
Lecturer	28,610	28,540	28,650	30,860
All Ranks	42,300	41,030	47,710	42,240
CATEGORY II-A				
Professor	45,880	45,910	46,090	45,130
Assoc. Professor	36,430	36,570	36,130	35,620
Ass't. Professor	29,810	30,080	28,710	29,260
Instructor	23,590	24,090	20,780	23,110
Lecturer	25,140	24,710	26,950	27,930
All Ranks	36,630	36,960	35,310	35,470
CATEGORY II-B				
Professor	40,120	40,680	45,170	36,080
Assoc. Professor	31,880	34,040	33,940	29,270
Ass't. Professor	26,260	28,450	27,160	24,310
Instructor	21,230	23,090	21,640	19,920
Lecturer	24,990	25,410	27,220	19,660
All Ranks	31,030	32,470	33,980	28,210
CATEGORY II-C				
Professor	44,010	49,900	45,790	32,720
Assoc. Professor	35,940	39,040	35,800	28,260
Ass't. Professor	30,770	34,100	30,290	23,750
Instructor	24,040	26,620	24,010	18,920
Lecturer	28,810	29,570	26,910	
All Ranks	35,230	39,970	34,300	27,940
CATEGORY III				
Professor	41,300	41,770	29,870	26,420
Assoc. Professor	34,620	34,950	27,950	22,270
Ass't. Professor	29,170	29,540	23,310	21,360
Instructor	24,080	24,520	18,510	17,920
Lecturer	22,960	23,410	14,120	
All Ranks	32,580	33,030	24,610	21,060
CATEGORY IV				
No Rank	29,830	30,190	18,870	21,290

* See original survey for definition of categories.

NOTE: Blanks indicate too few individuals for data to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1984-85, Special Issue, March-April, 1985.

TABLE 181

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION, AND SEX, 1984-85

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE/INDEPENDENT		CHURCH RELATED	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$44,430	$39,600	$42,850	$38,670	$50,300	$43,500	$45,080	$40,520
Associate Professor	33,320	30,250	31,760	29,740	34,650	32,210	33,900	31,080
Assistant Professor	27,250	24,850	26,860	24,510	28,560	26,110	28,140	25,560
Instructor	20,770	18,990	20,240	18,630	22,730	20,650	23,690	21,260
Lecturer	24,660	21,230	24,400	21,170	25,340	21,670	30,240	20,480
CATEGORY II-A								
Professor	37,420	35,690	37,260	35,690	38,440	35,060	37,630	33,430
Associate Professor	29,990	28,270	29,950	28,520	30,420	27,560	29,810	27,150
Assistant Professor	24,880	23,420	24,930	23,600	24,710	22,700	24,730	23,090
Instructor	19,990	18,840	20,240	19,110	18,300	17,430	20,060	18,430
Lecturer	21,360	19,130	20,800	18,810	23,580	20,600	24,850	21,250
CATEGORY II-B								
Professor	33,140	31,030	34,020	32,940	37,760	34,850	29,900	27,240
Associate Professor	26,670	24,950	28,320	27,660	28,060	26,520	24,730	22,480
Assistant Professor	22,360	21,110	23,900	22,940	22,910	21,960	20,920	19,590
Instructor	18,490	17,290	19,600	18,410	18,770	17,950	17,600	16,410
Lecturer	21,630	19,810	21,710	20,430	25,330	20,440	17,460	15,370
CATEGORY II-C								
Professor	35,560	29,830	41,310	35,550	38,700	30,520	26,240	22,550
Associate Professor	29,990	27,060	32,230	28,890	30,210	27,470	23,050	22,330
Assistant Professor	26,550	22,870	28,590	25,420	26,500	22,710	19,990	19,060
Instructor	20,800	18,830	23,330	20,390	20,460	19,000	16,550	15,710
Lecturer	25,820	20,610	25,700	21,420	26,960	17,110		
CATEGORY III								
Professor	33,250	31,790	33,560	32,230	25,890	21,800	21,250	21,440
Associate Professor	28,400	27,090	28,670	27,300	23,180	22,420	19,300	16,390
Assistant Professor	23,940	22,630	24,180	22,900	20,010	18,530	17,310	17,960
Instructor	20,050	18,680	20,310	18,680	15,920	15,300	14,450	15,500
Lecturer	19,170	16,630	19,170	17,000				
CATEGORY IV								
No Rank	25,440	23,120	25,630	23,120	18,130	14,710	19,000	17,050

*See original survey for definition of categories. Note: Sample includes 2,056 institutions providing data by gender. Blanks indicate too few individuals to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1984-85, Special Issue

TABLE 182

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, AND REGION, 1984-85

ACADEMIC RANK	WEST		NORTH CENTRAL		NORTHEAST		SOUTH		
	Pacific	Mountain	West N. Central	East N. Central	Middle Atlantic	New England	West S. Central	East S. Central	South Atlantic
CATEGORY I									
Professor	$47,740	$39,220	$40,580	$42,910	$48,450	$49,210	$42,200	$39,370	$44,050
Assoc. Professor	32,060	29,940	30,310	31,790	34,330	33,760	31,240	30,040	32,250
Ass't. Professor	27,320	25,120	25,720	26,640	27,200	27,710	25,960	24,930	26,610
Instructor	19,860	20,520	18,950	19,980	19,170	22,210	19,310	18,580	20,360
Lecturer	27,110	21,560	17,450	20,830	22,890	26,380	21,030	21,160	21,090
All Ranks	**38,320**	**32,430**	**33,290**	**34,440**	**37,430**	**38,630**	**32,730**	**31,330**	**34,000**
CATEGORY II-A									
Professor	40,430	34,590	34,860	34,670	38,940	39,260	34,970	33,240	36,220
Assoc. Professor	30,850	28,550	28,650	28,900	31,250	30,680	29,080	27,940	29,460
Ass't. Professor	25,190	24,270	23,700	23,980	25,240	25,170	24,390	23,290	24,580
Instructor	21,420	20,580	19,230	19,480	20,380	20,380	19,720	19,410	19,250
Lecturer	23,320	20,910	17,620	19,730	23,030	24,340	18,180	18,890	20,940
All Ranks	**34,980**	**28,330**	**27,790**	**28,620**	**31,280**	**31,290**	**27,750**	**26,940**	**28,660**
CATEGORY II-B									
Professor	34,530	32,030	30,010	31,970	37,030	38,650	29,280	29,020	30,930
Assoc. Professor	28,020	26,200	24,300	25,630	29,090	29,570	25,330	23,890	25,220
Ass't. Professor	22,340	22,230	20,670	21,220	23,240	24,330	22,520	20,190	21,560
Instructor	18,430	18,910	17,690	17,780	19,090	19,970	19,430	16,740	17,610
Lecturer	22,300	17,730	19,550	18,980	21,510	25,450	18,340	15,980	20,350
All Ranks	**27,440**	**26,240**	**23,620**	**25,470**	**28,120**	**29,580**	**24,330**	**23,020**	**24,610**
CATEGORY II-C									
Professor	39,190	38,200	29,920	32,670	44,350	36,080	35,870	30,480	36,970
Assoc. Professor	27,850	29,000	26,550	27,530	31,700	30,060	33,290	25,810	31,170
Ass't. Professor	28,300	23,890	25,260	22,910	24,660	24,820	26,470	21,890	26,530
Instructor	20,780	20,710	18,230	18,260	18,930	21,260	17,200	17,580	21,310
Lecturer	29,450	22,490	17,500	19,520	17,080	29,300	18,030		21,640
All Ranks	**30,690**	**29,640**	**26,790**	**26,880**	**30,630**	**27,840**	**28,560**	**25,390**	**30,490**
CATEGORY III									
Professor	32,890	27,690	33,190	32,950	35,630	28,360	33,830	26,640	31,700
Assoc. Professor	30,110	26,260	28,030	28,580	30,170	24,560	29,200	22,500	26,380
Ass't. Professor	26,210	23,150	22,790	23,550	25,160	21,070	25,220	19,780	22,360
Instructor	23,070	20,410	18,850	19,950	19,760	17,900	22,470	17,240	18,440
Lecturer				20,980	17,960	12,430	16,770		18,620
All Ranks	**31,040**	**22,850**	**25,960**	**26,280**	**28,230**	**23,530**	**26,130**	**21,040**	**25,220**
CATEGORY IV									
No Rank	28,500	26,970	23,100	25,610	23,200	22,380	25,420	21,390	22,060

*See original survey for definition of categories. NOTE: Sample includes 2,059 institutions.

SOURCE: American Association of Universiy Professors, The Annual Report on the Economic Status of the Profession, 1984-85, Special Issue.

TABLE 183

AVERAGE SALARY, FRINGE BENEFITS, COMPENSATION AND PERCENT TENURED OF FULL-TIME FACULTY MEMBERS IN INSTITUTIONS OF HIGHER EDUCATION BY RANK, 1984-85

ACADEMIC RANK	Average Salary	Average Fringe Benefits	Average Compen-sation	Benefits As % of Salary	% Tenured
Professor	$39,870	$8,730	$48,600	21.9	96.0
Associate Professor	29,910	6,710	36,620	22.4	83.0
Assistant Professor	24,610	5,450	30,060	22.1	25.0
Instructor	19,150	4,200	23,350	21.9	8.0
Lecturer	22,020	5,270	27,290	23.9	3.0
Other	21,510	4,540	16,050	21.1	12.0
All Ranks	30,960	6,850	37,810	22.1	65.0

TABLE 184

PERCENT AND AVERAGE SALARY OF FACULTY MMBERS IN PERCLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY TYPE OF AFFILIATION AND ACADEMIC RANK, 1984-85

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE	
	% of Faculty	Salary	% of Faculty	Salary	% of Faculty	Salary
Professor	31.3	$57,240	29.1	$55,120	35.7	$60,760
Associate Professor	26.3	42,270	25.0	41,710	28.8	43,260
Assistant Professor	26.6	33,790	24.8	33,590	30.4	34,130
Instructor	15.8	27,300	21.1	27,430	5.1	26,210
All Ranks	100.0	42,320	100.0	40,580	100.0	45,880

Note: Sample includes 25 private and 39 public medical schools. Data on 12-month basis.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the U.S., 1983, NSF 85-303.

TABLE 185

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY EDUCATIONAL INSTITUTIONS BY FIELD, 1979-1983

FIELD	1979				1981				1983			
	Number	%	% of total employed	Median annual salary	Number	%	% of total empl.	Median annual salary	Number	%	% of total empl.	Median annual salary
TOTAL	174,483	100.0	55.5	$26,400	187,011	100.0	54.5	$31,100	196,050	100.0	53.1	$36,200
Physical Scientists	27,300	15.6	45.3	26,400	28,225	15.1	44.7	31,800	27,931	14.2	43.7	37,200
Chemists	15,201	8.7	38.3	25,500	15,675	8.4	37.4	30,800	15,037	7.7	36.4	35,600
Physicists/Astronomers	12,099	6.9	58.8	27,700	12,550	6.7	59.2	33,500	12,894	6.6	56.8	40,100
Mathematical Scientists	12,550	7.2	82.3	25,550	12,719	6.8	81.7	30,400	13,244	6.8	80.9	35,600
Mathematicians	10,720	6.1	83.5	25,300	10,998	5.9	84.4	30,400	11,365	5.8	83.6	35,400
Statisticians	1,830	1.0	76.0	26,900	1,721	0.9	67.6	31,000	1,879	1.0	67.3	36,300
Computer Specialists	2,404	1.4	36.0	25,700	3,010	1.6	33.2	30,700	4,031	2.1	33.1	37,000
Environmental Scientists	6,146	3.5	42.2	26,700	6,741	3.6	42.4	31,200	6,682	32.4	40.6	36,200
Earth Scientists	4,618	2.6	41.7	26,600	4,965	2.7	41.4	31,700	4,658	2.4	37.2	36,600
Oceanographer	789	0.5	47.5	26,700	987	0.5	55.0	28,300	1,082	0.6	62.1	31,700
Atmospheric Scientists	739	0.4	40.4	27,300	789	0.4	37.1	31,500	942	0.5	42.8	34,700
Engineers	17,074	9.8	33.9	30,000	18,042	9.6	31.6	36,400	20,320	10.4	33.0	42,500
Life Scientists	51,673	29.6	65.5	26,400	55,762	29.8	65.7	30,900	58,906	30.0	63.5	35,700
Biological Scientists	32,929	18.9	72.2	25,200	35,783	19.1	72.1	29,900	38,046	19.4	68.9	34,800
Agricultural Scientists	7,048	4.0	55.1	27,100	7,635	4.1	56.6	30,900	8,189	4.2	56.3	35,900
Medical Scientists	11,696	6.7	57.2	30,000	12,344	6.6	56.6	35,400	12,671	6.5	54.9	38,900
Psychologists	19,846	11.4	52.4	25,600	21,675	11.6	50.6	29,100	22,182	11.3	47.6	33,600
Social Scientists	37,490	21.5	74.3	25,600	40,837	21.8	73.5	29,700	42,754	21.8	72.1	34,400
Economists	9,129	5.2	65.3	28,600	10,630	5.7	66.5	33,300	11,362	5.8	67.0	37,600
Sociologists/Anthropologists	8,821	5.1	86.5	24,000	9,303	5.0	84.5	28,400	10,369	5.3	86.0	31,800
Other Social Scientists	19,540	11.2	74.3	24,900	20,904	11.2	73.3	29,100	21,023	10.7	69.3	33,800

NOTE: Percents may not add to 100 because of rounding.
Median salaries computed for full-time employed civilians only.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 186

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1983

FIELD & SALARY BASE	TOTAL	ACADEMIC RANK			
		Professor	Associate Professor	Assistant Professor	Other
ALL FIELDS					
Academic Year	$29,600	$35,600	$27,400	$22,500	$23,700
Calendar Year	36,700	44,100	35,100	28,200	27,600
PHYSICAL SCIENTISTS					
Academic Year	30,300	35,300	26,900	21,500	
Calendar Year	38,300	43,200	34,400	29,700	25,700
CHEMISTS					
Academic Year	29,200	33,900	26,200	21,200	
Calendar Year	37,500	40,900	34,500	23,600	
PHYSICISTS/ASTRONOMERS					
Academic Year	31,900	36,400	27,600	22,600	
Calendar Year	40,700	44,200	34,100		
MATHEMATICAL SCIENCES					
Academic Year	29,400	35,800	27,200	22,200	
Calendar Year	35,000	41,200	32,400	25,300	
MATHEMATICIANS					
Academic Year	29,800	35,700	27,100	21,900	
Calendar Year	34,000	38,900	32,200	26,000	
STATISTICIANS					
Academic Year	28,100	36,600	27,500	22,600	
Calendar Year					
COMPUTER/INFORMATION SPECIALISTS					
Academic Year	31,500	35,200	30,900	27,900	
Calendar Year	33,900				
ENVIRONMENTAL SCIENTISTS					
Academic Year	30,400	35,600	27,700	22,600	
Calendar Year	36,000	44,900	34,600	22,600	
EARTH SCIENTISTS					
Academic Year	30,500	35,000	27,900	23,700	
Calendar Year	36,300	43,800	32,300		
OCEANOGRAPHERS					
Academic Year	25,500				
Calendar Year	33,600				
ATMOSPHERIC SCIENTISTS					
Academic Year	35,400				
Calendar Year	33,600				
ENGINEERS					
Academic Year	44,300	38,400	31,200	28,500	
Calendar Year	44,300	51,500	40,000	36,200	
LIFE SCIENTISTS					
Academic Year	27,700	33,100	26,100	21,700	
Calendar Year	36,600	45,000	35,500	29,400	
BIOLOGICAL SCIENTISTS					
Academic Year	27,400	33,300	25,900	21,500	
Calendar Year	35,900	45,300	35,200	29,800	24,600
AGRICULTURAL SCIENTISTS					
Academic Year	28,900	34,500			
Calendar Year	35,900	40,800	34,800	27,000	

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1983, NSF 85-303.

TABLE 186 (continued)

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1983

FIELD & SALARY BASE	TOTAL	ACADEMIC RANK			
		Professor	Associate Professor	Assistant Professor	Other
MEDICAL SCIENTISTS					
Academic Year	$28,200	$31,600	$26,900	$22,600	
Calendar Year	40,200	48,900	38,200	30,700	
PSYCHOLOGISTS					
Academic Year	27,400	34,900	26,000	20,500	
Calendar Year	35,900	42,400	36,400	26,800	
SOCIAL SCIENTISTS					
Academic Year	28,500	35,400	27,100	22,400	
Calendar Year	32,600	40,900	30,000	24,300	
ECONOMISTS					
Academic Year	31,100	36,600	29,000	24,800	
Calendar Year	36,300	44,700	33,900	27,100	
SOCIOLOGISTS/ ANTHROPOLOGISTS					
Academic Year	26,900	35,000	25,800	21,400	
Calendar Year	30,900	36,300	29,400	21,900	
OTHER SOCIAL SCIENTISTS					
Academic Year	28,100	34,500	26,700	21,500	
Calendar Year	31,000	41,300	26,800	23,800	

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 187

MEDIAN AND MEAN ANNUAL SALARIES OF Ph.D. CHEMISTS* EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY TYPE OF ACTIVITY AND ACADEMIC RANK, 1985

ACADEMIC RANK	TYPE OF ACTIVITY					
	TEACHING		RESEARCH		ADMINISTRATION	
	Median	Mean	Median	Mean	Median	Mean
Professor	$42,778	$42,248	$48,000	$46,602	$46,444	$45,689
Associate Professor	34,467	34,913	39,000	38,836	40,000	40,124
Assistant Professor	27,995	28,099	31,656	32,224	30,556	32,570
Instructor	25,483	26,230	28,000	29,012	37,750	36,163
Research Associate	29,900	29,485	26,700	27,308	34,900	34,721
Unranked	34,222	33,799	42,000	42,612	36,222	37,925
No Response	33,000	31,230	35,250	34,325	38,000	37,414
TOTAL	**36,667**	**36,975**	**38,000**	**38,113**	**43,000**	**42,442**

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 188

MEDIAN SALARIES OF FULL-TIME EMPLOYED Ph.D. ACADEMIC CHEMISTS* TEACHING ONE-HALF TIME OR MORE BY ACADEMIC RANK AND YEARS SINCE B. S., 1985

Years Since B.S.	ACADEMIC RANK					
	Professor	Associate Professor	Assistant Professor	Instructor	Unranked	Total
5-9	$	$	$27,500	$23,528	$	$26,278
10-14	40,822	32,572	27,439	24,444	24,078	27,806
15-19	37,889	32,633	28,295	25,667	30,350	31,533
20-24	40,000	34,222	28,111	28,417	36,667	36,667
25-29	42,778	36,667	28,722	28,845	37,278	40,333
30-34	42,778	37,278	33,000	29,945	37,200	40,944
35-39	45,222	39,172	29,333	30,000	39,722	43,144
> = 40	46,100	40,106	**		**	44,000
TOTAL	42,778	34,467	27,995	25,483	34,222	36,667

* Includes only members of the American Chemical Society.

** Less than five respondents.

TABLE 189

MEDIAN AND MEAN ANNUAL SALARIES OF FULL-TIME EMPLOYED Ph.D. CHEMISTS* BY TYPE OF ACADEMIC INSTITUTION AND RANK, 1985

TYPE OF INSTITUTION	ACADEMIC RANK							
	PROFESSORS		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTORS & RESEARCH ASSOC.	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
High School	$42,522	$42,821	$	$	$	$	$	$
Medical/Prof. School	49,000	46,950	40,394	40,772	33,000	33,667	28,000	29,686
Associate	40,211	40,410	34,222	35,038	25,056	26,076	30,278	29,519
Bachelor's	39,111	39,621	31,228	31,915	25,667	26,381	23,922	24,584
Master's	44,122	44,260	35,689	36,090	28,722	28,855	24,444	26,221
Doctorate	48,000	46,621	38,880	38,789	30,922	31,656	27,795	27,700
TOTAL	44,489	43,844	36,500	36,479	29,428	29,921	26,889	27,969

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1985 - Analysis of the American Chemical Society's 1985 Survey of Salaries and Employment, October 1985

TABLE 190

MEDIAN AND MEAN SALARIES OF Ph.D. CHEMISTS* EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY SPECIALTY AND ACADEMIC RANK, 1985

SPECIALTY	ACADEMIC RANK							
	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		INSTRUCTOR/ RESEARCH ASSOCIATE	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
Biochemistry	$46,444	$45,525	$38,000	$37,912	$30,556	$31,054	$25,056	$26,760
General	40,000	40,234	32,878	32,978	27,195	27,537	25,911	26,254
Analytical	44,000	43,094	35,444	36,145	29,333	29,352	30,000	30,379
Inorganic	44,000	44,018	36,667	36,600	28,722	28,992	26,156	27,263
Organic	44,000	43,245	34,222	35,069	29,211	28,888	26,278	27,857
Polymer	48,889	46,780	40,333	41,604	34,528	34,521	34,900	34,037
Pharmaceutical	50,000	45,954	39,111	36,464	29,333	31,256	24,500	25,525
Medicinal/Clinical	45,000	43,053	39,500	39,159	33,978	33,572	25,334	26,760
Theoretical	47,667	46,034	36,667	37,220	29,334	29,614	20,500	22,875
Environmental	48,889	46,556	39,233	39,399	35,222	35,514	29,000	30,562
Agricultural/Food	43,000	43,716	36,000	36,918	30,000	29,805	26,700	27,782
Physical	45,222	44,283	35,444	36,019	28,556	29,017	28,861	28,489
Other Chemistry	45,000	44,557	41,000	40,469	32,650	33,656	28,500	29,701
TOTAL	**44,489**	**43,844**	**36,500**	**36,479**	**29,428**	**29,921**	**26,889**	**27,969**

* Includes only members of the American Chemical Society.

TABLE 191

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED Ph.D. CHEMISTS* BY ACADEMIC RANK AND SEX, 1985

ACADEMIC RANK	TOTAL			MEN			WOMEN		
	No. of Respondents†	Median	Mean	No. of Respondents	Median	Mean	No. of Respondents	Median	Mean
Professors	2,347	44,489	43,844	2,201	44,611	43,975	138	42,778	41,832
Associate Prof.	1,226	36,500	36,479	1,059	36,667	36,818	162	34,222	34,150
Assistant Prof.	880	29,428	29,921	730	29,639	30,018	148	29,333	29,480
Instructors/ Other Non-Tenure Track Rank	374	32,000	28,244	281	32,400	29,199	93	28,000	25,358

* Includes only members of the American Chemical Society.
† Includes no response.

SOURCE: The American Mathematical Society NOTICES, Vol. 31, No. 7, November 1984.

TABLE 192

NUMBER AND MEDIAN SALARY RANGES FOR DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1983-1984 AND 1984-85

TYPE OF INSTITUTION	RANK	1983 - 1984 NUMBER OF FACULTY		1983 - 1984 MEDIAN RANGES	1984 - 1985 NUMBER OF FACULTY		1984 - 1985 MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments GROUP I*	Instructor/Lecturer	63	10	$21,000-23,000	39	5	$21,000-25,000
	Assistant Professor	184	18	22,500-25,500	182	17	24,000-27,800
	Associate Professor	191	14	27,800-31,500	184	11	30,700-35,000
	Professor	859	26	40,500-50,200	886	28	43,500-55,400
Doctorate Granting Departments GROUP II*	Instructor/Lecturer	56	7	18,300-21,700	55	8	19,000-23,900
	Assistant Professor	256	29	22,500-26,000	249	33	26,800-30,000
	Associate Professor	369	20	27,300-31,200	350	22	28,700-32,600
	Professor	587	17	35,500-42,900	632	18	38,300-46,500
Doctorate Granting Departments GROUP III*	Instructor/Lecturer	27	7	16,000-19,900	25	7	17,800-21,500
	Assistant Professor	293	38	21,800-25,200	314	40	24,000-27,000
	Associate Professor	394	23	26,900-31,000	391	23	28,500-33,000
	Professor	556	8	34,500-41,800	564	11	36,000-43,300
Doctorate Granting Departments GROUP IV*	Instructor/Lecturer	5	2		4	2	
	Assistant Professor	152	24	23,800-26,600	152	27	24,800-28,500
	Associate Professor	119	13	28,600-34,500	126	12	29,400-35,400
	Professor	286	11	41,000-52,200	296	13	41,700-54,100
Doctorate Granting Departments GROUP V*	Instructor/Lecturer	12	2		6	2	
	Assistant Professor	31	0	24,500-29,400	42	0	27,000-32,400
	Associate Professor	32	0	33,000-37,500	28	0	36,000-41,500
	Professor	103	4	40,400-51,000	107	4	43,400-53,000
Doctorate Granting Departments GROUP VI*	Instructor/Lecturer	1	0		0	0	
	Assistant Professor	33	6	21,100-33,800	33	3	26,500-33,800
	Associate Professor	113	6	31,000-47,300	103	6	31,900-59,000
	Professor	149	3	38,800-59,000	151	3	43,000-61,400
Master's Degree Granting Departments	Instructor/Lecturer	65	11	18,300-23,100	65	11	18,300-25,000
	Assistant Professor	493	74	22,000-24,900	537	82	23,000-26,500
	Associate Professor	739	74	25,800-30,100	755	88	27,700-32,400
	Professor	898	54	32,000-37,000	920	55	33,600-39,900
Bachelor's Degree Granting Departments	Instructor/Lecturer	24	7	17,000-22,100	18	5	19,500-24,900
	Assistant Professor	447	110	20,300-24,000	458	114	21,600-25,300
	Associate Professor	502	49	23,700-29,700	537	59	25,000-31,000
	Professor	491	35	27,000-35,500	515	44	28,900-37,500

* Group I and Group II include the leading departments of mathematics in the U.S. according to the 1982 assessment of Research-Doctorate Programs conducted by the Conference Board of Associated Research Councils in which departmens were rated according to the quality of their graduate faculty. Group I is composed of 39 departments with scores in the 3.0 - 5.0 range. Group II is composed of 43 departments with scores in the 2.0 - 2.9 range. Group III is composed of the remaining U.S. departments reporting a doctoral program. Group IV contains U.S. departments (or programs) of statistics, biostatistics and biometrics reporting a doctoral program. Group V contains U.S. departments (or programs) in the mathematical sciences in Canadian universities. Group M (master's) contains U.S. departments granting a master's degree as the highest graduate degree. Group B (bachelor's) contains U.S. departments granting a baccalaureate degree only.

SOURCE: The American Mathematical Society NOTICES, Vol. 31, No. 7, November 1984.

TABLE 193

NUMBER AND MEDIAN SALARY RANGES FOR NON-DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1983-1984 AND 1984-85

TYPE OF INSTITUTION	NON-PH.D. DEGREE RANK	1983 - 1984 NUMBER OF FACULTY Total	1983 - 1984 NUMBER OF FACULTY Women	1983 - 1984 MEDIAN RANGES	1984 - 1985 NUMBER OF FACULTY Total	1984 - 1985 NUMBER OF FACULTY Women	1984 - 1985 MEDIAN RANGES
Doctorate Granting Departments GROUP II*	Instructor/Lecturer	89	57	$15,500-20,100	87	52	$17,800-21,600
	Assistant Professor	6	1		4	0	
	Associate Professor	12	3		10	3	
	Professor	4	0		3	0	
Doctorate Granting Departments GROUP III*	Instructor/Lecturer	73	52	14,300-19,800	78	53	16,000-20,000
	Assistant Professor	45	18	20,800-25,000	40	16	23,200-26,400
	Associate Professor	18	1	26,900-34,200	19	1	28,000-37,700
	Professor	7	0		5	0	
Master's Degree Granting Departments	Instructor/Lecturer	326	193	15,500-19,100	345	207	16,400-20,300
	Assistant Professor	194	47	20,000-26,000	185	46	22,500-27,100
	Associate Professor	132	16	25,000-30,200	137	17	26,300-31,100
	Professor	28	2	31,500-36,600	26	2	32,300-38,900
Bachelor's Degree Granting Departments	Instructor/Lecturer	330	178	16,000-19,000	338	178	16,800-20,300
	Assistant Professor	260	66	18,500-24,400	271	70	20,000-25,300
	Associate Professor	172	20	22,100-28,500	164	20	23,200-30,400
	Professor	47	4	25,000-34,400	51	7	27,400-38,500

* Please see footnote on following table.

Source: American Institute Of Physics, 1983 Salaries, Society Membership Survey, August 1985.

TABLE 194

1983 UNIVERSITY SALARIES OF PHYSICISTS* BY ACADEMIC RANK AND SALARY BASE

RANK	NO.	MEDIAN	MEAN
PROFESSOR			
9-10 Month	519	$38,800	$40,000
11-12 Month	173	49,000	50,400
ASSOCIATE PROFESSOR			
9-10 Month	179	29,000	29,200
11-12 Month	73	38,000	40,800
ASSISTANT PROFESSOR			
9-10 Month	117	24,000	24,300
11-12 Month	58	30,000	33,200
RESEARCH ASSOCIATE (11-12 Month)			
Postdoctorates	74	19,100	19,500
Other Research Staff	59	32,000	30,800

*Includes only members of the AIP member societies.

SOURCE: American Psychological Association, 1984-85 Faculty Salaries in Graduate Departments of Psychology, January 1985.

TABLE 195

NUMBER, MEAN AND MEDIAN 9-MONTH SALARIES OF FULL-TIME FACULTY IN U.S. DOCTORAL DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1984-85

GEOGRAPHIC REGION	ACADEMIC RANK AND YEARS IN RANK										
		Full Professor			Associate Professsor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
NEW ENGLAND											
(13 Depts.) No.	70	49	14	15	37	16	23	29	32	0	2
Mean	$50,596	$42,514	$38,750	$38,460	$32,935	$29,925	$28,826	$25,317	$23,634		$20,500
Median	50,350	41,900	37,850	37,500	33,100	29,100	28,100	25,500	23,400		20,500
MIDDLE ATLANTIC											
(24 Depts.) No.	122	78	31	31	93	51	41	70	55	6	1
Mean	51,577	46,044	46,935	42,139	35,629	34,698	31,429	26,617	24,136	$28,633	
Median	50,100	46,600	46,500	42,000	35,300	34,700	30,400	26,100	23,500	29,200	
EAST NORTH CENTRAL											
(28 Depts.) No.	179	106	57	34	117	60	56	70	69	3	13
Mean	45,397	40,420	39,751	37,262	31,670	29,575	29,046	24,380	22,868	26,033	23,431
Median	44,500	40,600	38,100	36,300	31,000	29,300	28,200	23,800	23,000	28,900	22,500
WEST NORTH CENTRAL											
(13 Depts.) No.	68	31	26	18	23	27	12	30	18	2	4
Mean	43,174	37,710	35,662	32,467	29,704	28,615	25,417	23,020	23,250	21,400	21,950
Median	43,500	35,800	36,000	31,650	29,500	28,400	26,450	22,650	22,950	21,400	22,800
SOUTH ATLANTIC											
(28 Depts.) No.	124	85	43	33	91	58	56	69	52	1	6
Mean	46,961	42,094	38,026	34,864	30,267	29,845	27,368	24,030	22,812		23,083
Median	46,500	40,600	37,700	34,700	30,300	29,700	27,000	24,000	22,500		22,500
EAST SOUTH CENTRAL											
(11 Depts.) No.	43	20	13	15	28	25	12	28	27	0	2
Mean	43,381	39,815	38,208	33,973	27,032	30,464	25,517	23,379	22,363		20,850
Median	41,700	38,600	36,800	35,300	26,750	28,800	27,400	22,450	22,000		20,850
WEST SOUTH CENTRAL											
(11 Depts.) No.	47	34	16	13	36	22	17	38	26	1	2
Mean	42,719	42,144	41,319	44,538	30,250	30,150	28,788	23,795	23,485		
Median	42,800	40,000	39,200	41,800	30,650	29,150	29,000	23,150	22,800		
MOUNTAIN											
(9 Depts.) No.	38	43	8	11	34	13	7	20	19	1	0
Mean	42,437	40,070	35,662	35,991	29,668	26,938	26,771	22,750	21,953		
Median	41,800	39,100	35,000	31,600	30,350	26,000	26,300	22,350	22,000		
PACIFIC											
(12 Depts.) No.	124	58	36	27	26	26	16	15	24	0	1
Mean	48,999	43,728	37,889	37,111	30,135	30,738	28,212	26,467	24,500		
Median	47,300	42,400	39,300	36,000	30,600	30,950	27,400	26,800	24,350		

SOURCE: American Psychological Association, 1984-85 Faculty Salaries in Graduate Departments of Pscyhology, January 1985.

TABLE 196

NUMBER, MEAN, AND MEDIAN 9-MONTH SALARIES OF FULL-TIME FACULTY IN U.S. MASTER'S DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1984-85

GEOGRAPHIC REGION	ACADEMIC RANK AND YEARS IN RANK										
	Full Professor				Associate Professsor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
NEW ENGLAND											
(4 Depts.) No.	8	5	2	6	6	2	5	12	5	0	0
Mean	$48,000	$39,860	$35,250	$36,933	$35,783	$32,700	$26,260	$26,067	$23,060		
Median	46,600	40,200	35,250	34,350	36,400	32,700	26,600	25,100	23,300		
MIDDLE ATLANTIC											
(13 Depts.) No.	40	19	8	6	43	15	11	16	11	0	3
Mean	39,507	41,532	38,725	34,033	33,528	30,713	29,245	25,525	23,218		13,333
Median	37,000	38,000	37,600	34,250	33,000	30,900	28,500	27,100	23,500		14,500
EAST NORTH CENTRAL											
(15 Depts.) No.	41	29	12	21	32	29	12	27	24	0	2
Mean	37,832	33,048	32,808	29,657	29,769	26,800	25,375	23,278	20,583		19,000
Median	36,900	32,500	30,850	28,800	29,950	26,700	24,850	22,200	20,250		19,000
WEST NORTH CENTRAL											
(10 Depts.) No.	18	11	4	6	11	12	12	25	8	0	2
Mean	35,961	36,864	33,675	36,050	29,582	28,292	26,233	24,684	20,487		19,000
Median	39,100	37,200	34,500	36,700	30,200	27,900	26,100	25,100	19,600		19,000
SOUTH ATLANTIC											
(22 Depts.) No.	28	26	10	13	45	20	17	31	26	3	5
Mean	35,868	35,092	33,360	29,469	28,891	27,200	25,418	22,877	20,558	20,533	16,400
Median	34,550	35,100	34,100	30,000	28,700	27,600	25,100	22,400	20,800	22,100	17,000
EAST SOUTH CENTRAL											
(9 Depts.) No.	9	21	9	11	25	8	8	5	13	1	4
Mean	32,500	32,443	31,833	30,736	27,528	27,137	23,450	21,180	20,262		17,700
Median	32,400	32,100	31,800	31,800	27,300	27,150	23,050	21,900	19,800		17,200
WEST SOUTH CENTRAL											
(10 Depts.) No.	20	5	3	4	21	7	7	15	12	0	2
Mean	35,570	35,680	30,600	31,750	30,519	26,114	28,000	23,840	22,858		18,000
Median	35,500	36,600	30,800	32,500	30,000	27,000	28,200	24,000	22,500		18,000
MOUNTAIN											
(4 Depts.) No.	5	4	3	0	3	2	2	5	2	0	0
Mean	34,180	32,875	29,067		28,533	25,800		22,180	21,750		
Median	33,400	32,450	29,200		28,300	25,800		21,600	21,750		
PACIFIC											
(15 Depts.) No.	61	74	27	17	35	11	14	6	12	0	3
Mean	36,834	34,714	35,274	30,965	29,080	30,391	27,793	23,850	23,867		22,433
Median	36,900	34,900	35,200	32,100	29,200	30,300	26,600	23,000	22,800		22,100

SOURCE: American Psychological Association, 1984-85 Faculty Salaries in Graduate Departments of Pscyhology, January 1985.

TABLE 197

NUMBER, MEAN, AND MEDIAN 9-MONTH SALARIES OF FULL-TIME FACULTY IN U.S. DOCTORAL DEPARTMENTS OF PSYCHOLOGY BY TYPE OF DEPARTMENT, RANK AND YEARS IN RANK, 1984-85

DEPARTMENT	ACADEMIC RANK AND YEARS IN RANK										
	Full Professor				Associate Professsor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
PSYCHOLOGY											
(149 Depts.) No.	815	504	244	197	485	298	240	369	322	14	31
Mean	$46,970	$42,053	$39,478	$37,419	$31,573	$30,540	$28,542	$24,562	$23,248	$26,836	$22,706
Median	46,100	40,800	38,600	36,000	31,100	29,750	28,000	24,200	23,000	28,200	22,200
EDUCATIONAL PSYCHOLOGY											
(21 Depts.) No.	83	53	15	12	47	19	27	22	11	2	5
Mean	40,980	39,077	33,693	36,575	31,421	28,542	28,011	24,468	24,427	34,800	21,240
Median	41,200	38,900	32,900	34,650	31,200	28,700	27,000	24,500	24,100	34,800	21,000
COUNSELING PSYCHOLOGY											
(20 Depts.) No.	36	40	9	8	27	8	10	18	17	1	2
Mean	40,481	35,945	33,322	37,462	32,985	31,287	30,400	26,617	21,471		25,800
Median	39,050	33,200	30,000	35,200	33,000	32,150	27,950	26,300	21,000		25,800
HUMAN DEVELOPMENT											
(9 Depts.) No.	27	19	12	5	31	11	10	22	15	4	2
Mean	47,485	41,311	40,992	31,120	32,761	30,527	30,340	25,877	24,493	22,225	20,750
Median	45,300	38,900	39,750	30,800	32,500	30,700	29,200	25,250	23,400	22,750	20,750
PROFESSIONAL SCHOOL											
(10 Depts.) No.	11	7	8	7	9	7	20	11	21	0	0
Mean	45,573	41,343	40,150	36,157	29,278	26,529	30,750	24,791	23,081		
Median	43,300	35,200	42,350	38,500	26,800	24,900	31,400	25,300	22,100		
OTHER*											
(13 Depts.) No.	64	38	13	10	37	17	4	18	15	0	0
Mean	42,806	39,408	34,346	33,480	32,189	29,824	25,675	26,561	23,827		
Median	40,700	36,450	35,500	30,500	31,900	30,500	25,750	27,100	24,000		

* This is a heterogeneous category which includes, for example, school psychology, biological psychology, interdisciplinary programs, etc.

Source: American Psychological Association, Salaries in Psychology 1985, August 1985.

TABLE 198

MEDIAN AND MEAN 9-10 MONTH SALARIES FOR DOCTORAL-LEVEL PSYCHOLOGISTS+ IN FACULTY POSITIONS BY EMPLOYMENT SETTING AND ACADEMIC RANK, 1985

EMPLOYMENT SETTING	ACADEMIC RANK							
	FULL PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		LECTURER/INSTRUCTOR	
	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN	MEDIAN	MEAN
University Psychology Department	$42,000	$43,107	$30,000	$30,606	$24,000	$24,152	$22,000	$23,429
University Education Department	42,000	43,496	30,000	31,122	24,000	24,900		
University Business School or Department	50,000	51,941	37,000	38,892	32,000	32,383		
University Other Academic Department	45,000	45,791	33,500	34,121	26,500	26,886		
University Student Counseling Center*	31,909	32,482	27,000	28,052				
University Research Center*	38,045	38,455	34,364	36,245	25,364	25,364	25,587	
University, Other Setting	42,000	44,308	25,000	25,800				
Four Year College Psychology Department	34,000	35,453	28,000	28,025	21,500	21,817		
Four Year College Education Department	40,000	39,158	28,000	30,143	22,000	23,364		
Four Year College Business School or Dept.			38,000	35,857	32,000	32,143		
Four Year College Other Academic Department	38,000	36,818	26,000	27,316	23,500	23,833		
Two Year College	38,000	38,188	29,000	28,867			31,500	30,333
Medical School Psychiatry Department*	46,277	46,582	34,364	36,701	27,000	28,227	20,455	19,739
Medical School, Other Department*	45,000	44,314	34,773	35,785	27,000	27,499	22,091	23,143
Professional School*	40,500	40,991	27,000	27,468				

+Members of the American Psychological Association.
*Salaries in these settings are often paid on an 11-12 month basis. Therefore, the 9-10 month salaries reported here may be converted to 11-12 month salaries by multiplying by 11/9.
NOTE: Blanks indicate fewer than 5 respondents.

SOURCE: American Psychological Association, 1984-85 Faculty Salaries in Graduate Departments of Psychology, January 1985.

TABLE 199

NUMBER, MEDIAN AND MEAN 9-MONTH SALARIES OF FULL-TIME FACULTY IN UNITED STATES DEPARTMENTS OF PSYCHOLOGY BY RANK, TYPE OF DEPARTMENT AND YEARS IN RANK, 1984-85

YEARS IN RANK AND TYPE OF DEPARTMENT	Full Professor			Associate Professor			Assistant Professsor			Lecturer or Instructor		
	No.	Median	Mean	No.	Median	Mean	No.	Median	Mean	No.	Median	Mean
AT LEAST 12 YEARS												
Doctoral	1,036	$44,700	$46,006									
Master's	270	37,000	37,753									
6-11 YEARS												
Doctoral	661	39,900	41,264									
Master's	216	34,950	35,313									
AT LEAST 6 YEARS												
Doctoral				636	$31,150	$31,683						
Master's				251	30,000	30,414						
3-5 YEARS												
Doctoral	301	37,900	38,862	360	29,700	30,339						
Master's	82	33,650	34,241	115	28,000	28,160						
AT LEAST 3 YEARS												
Doctoral							460	$24,300	$24,785	21	$28,000	$26,652
Master's							170	24,000	24,209	14	27,250	26,807
LESS THAN 3 YEARS												
Doctoral	239	36,000	37,044	311	27,900	28,719	401	23,000	23,265	40	22,350	22,580
Master's	90	31,700	31,680	103	25,600	26,325	128	21,500	21,740	22	18,000	17,823

Source: American Geological Institute, AGI Survey of Faculty Salaries - 1985, August 1985

TABLE 200

SALARIES OF GEOSCIENCE FACULTY BY RANK, 1985

RANK	No.	High Ranges	Bulk of High Salary Clusters	High Ranges		Low Ranges	Bulk of Low Salary Clusters	Low Ranges	
				Median	Mean			Median	Mean
Assistant Professor	180	$20,306-39,200	$24,000-30,900	$27,600	$27,628	$17,400-33,600	$21,000-27,000	$23,900	$24,250
Associate Professor	193	23,900-53,500	30,000-39,600	33,900	34,366	17,000-47,600	25,000-34,000	29,400	29,567
Professor	431	33,100-76,700	42,500-61,600	48,800	50,378	24,500-50,800	30,600-40,000	35,000	35,475

SOURCE: Engineering Manpower Commission of American Ass'n. of Engineering Societies, Salaries of Engineers in Education, 1984

TABLE 201

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON 9-10 MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1984

RANK	YEARS SINCE BACCALAUREATE								
	5	7	9-11	15-17	18-20	21-23	24-26	27-29	33+
Professors	$	$	(19) $38,450	(217) $40,250	(453) $41,050	(671) $41,700	(745) $42,300	(663) $42,800	(1,557) $43,500
Associate Professors	(5)	(23) 31,400	(223) 33,250	(521) 34,150	(463) 33,800	(348) 33,300	(271) 32,750	(188) 32,350	(322) 31,700
Assistant Professors	(94) 30,100	(223) 30,250	(672) 30,250	(253) 29,650	(110) 29,150	(65) 28,550	(48) 27,900	(45) 27,200	(61) 25,150
Instructors/Lecturers	(21) 20,050	(23) 20,700	(46) 21,700	(30) 23,650	(22) 24,600	(22) 25,450	(17) 26,300	(16) 27,000	(47) 28,550
Administrative Faculty				(10) 39,850	(25) 42,800	(34) 45,400	(40) 47,450	(49) 48,850	(55) 47,550

TABLE 202

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON 11-12 MONTH CONTRACTS BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1984

RANK OR POSITION	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	33+
Professors	$	$	$	(14) $57,750	(20) $52,250	(35) $51,150	(31) $50,450	(40) $50,050	(63) $51,750
Associate Professors	(1)	(7) 41,800	(30) 42,150	(20) 42,400	(45) 42,600	(24) 42,650	(15) 42,650	(7) 42,550	(22) 41,400
Assistant Professors	(8) 34,150	(41) 35,950	(37) 37,050	(30) 37,550	(23) 37,650	(13) 37,500	(6) 37,200	(5) 36,950	(10) 36,350
Researchers	(47) 25,350	(138) 26,850	(118) 28,300	(86) 29,750	(71) 31,150	(42) 32,500	(43) 33,750	(35) 34,900	(89) 37,950
Administrative/Faculty		(5) 30,800	(12) 44,200	(30) 51,550	(92) 54,150	(121) 54,750	(139) 54,850	(93) 54,850	(162) 54,850

TABLE 203

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN TECHNOLOGY SCHOOLS ON ALL CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1984

RANK	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	33+
Professors	$	$	(5) $28,400	(7) $30,500	(23) $31,850	(33) $32,650	(38) $33,100	(27) $33,350	(65) $33,550
Associate Professors		(11) 25,800	(20) 27,500	(35) 28,450	(34) 28,950	(39) 29,150	(40) 29,300	(27) 29,350	(52) 29,400
Assistant Professors	(9) 24,700	(32) 25,550	(35) 26,000	(24) 26,150	(24) 26,050	(27) 25,800	(17) 25,450	(22) 25,100	(30) 24,200
Instructors/Lecturers	(4)	(14) 21,600	(20) 22,350	(19) 23,050	(12) 23,650	(21) 24,200	(6) 24,650	(6) 25,000	(26) 25,750

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Salaries of Engineers in Education, 1984.

TABLE 204

NUMBER, MEDIAN AND MEAN SALARIES OF FACULTY IN ENGINEERING & TECHNOLOGY SCHOOLS BY RANK, TYPE OF INSTITUTION AND MONTHS ON CONTRACT, 1984

TYPE OF INSTITUTION	Professor	Associate Professor	Assistant Professor	Instructor	Researcher	Administrator
ENGINEERING SCHOOL, Ph.D. PROGRAM						
(9-10 Month Contract)						
Number	4,430	2,457	2,196	316	64	204
Median Salary	$43,400	33,950	30,300	21,650	28,650	48,350
Mean Salary	$44,650	34,100	30,000	23,400	29,850	50,300
(11-12 Month Contract)						
Number	202	158	164	65	895	632
Median Salary	$52,400	43,050	37,000	30,150	28,100	56,050
Mean Salary	$52,400	44,650	37,150	31,100	29,800	52,250
ENGINEERING SCHOOL, NON-Ph.D. PROGRAM						
(9-10 Month Contract)						
Number	667	592	385	120	2	46
Median Salary	$37,000	30,200	27,200	22,450		36,900
Mean Salary	$37,300	30,750	27,300	24,500		38,450
(11-12 Month Contract)						
Number	28	33	51	1	72	144
Median Salary			33,350			45,750
Mean Salary			33,150			46,400
TECHNOLOGY SCHOOLS						
(9-10 Month Contract)						
Number	223	263	230	129	1	28
Median Salary	$33,000	$28,900	$25,350	$22,350		
Mean Salary	34,550	29,350	25,700	22,350		
(11-12 Month Contract)						
Number	13	35	37	39	3	77
Median Salary		32,100		25,900		40,800
Mean Salary						40,800

NOTE: Blanks indicate no median/mean salaries computed for fewer than 5 respondents.

SOURCE: American Association of Colleges of Pharmacy, Annual Survey of Faculty Salaries, 1984-85.

TABLE 205

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY DISCIPLINE AND ACADEMIC RANK, 1984-85

DISCIPLINE	ACADEMIC RANK											
	Dean		Ass't./Assoc. Dean		Professor		Associate Professor		Assistant Professor		Instructor	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Pharmacy/Pharmaceutics	24	$66,290	11	$55,142	81	$51,353	63	$39,010	65	$33,123	5	$20,638
Pharmacology/Toxicology	9	63,082	13	47,078	63	49,957	49	38,012	34	30,750		
Hospital Pharmacy	*	*							10	33,066		
Pharmacy Administration	15	56,688	19	45,193	23	46,801	40	37,762	37	32,138	8	27,739
Pharmaceutical/Medicinal Chemistry	10	61,733	15	48,899	89	50,556	47	38,434	37	32,135		
Clinical Pharmacy			12	43,332	34	44,694	146	38,451	272	20,380	35	28,257
Pharmacognosy	5	63,526	8	46,599	15	52,050	20	38,302			*	*
Nuclear Pharmacy	*	*	*	*	5	38,807	5	34,740			*	*

*Data not submitted. NOTE: Blanks indicate insufficient data reported.

TABLE 206

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY YEARS IN RANK AND ACADEMIC RANK, 1984-85

YEARS IN RANK	ACADEMIC RANK											
	Professor		Associate Professor		Assistant Professor		Dean		Ass't./Assoc. Dean		Instructor	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
0 - 1	23	$45,561	59	$36,102	104	$30,658	5	$59,294	6	$46,275	6	$25,302
2 - 5	94	46,244	167	38,498	270	31,338	15	56,718	32	44,448	15	27,514
6 - 10	77	51,594	105	39,437	36	32,303	21	66,288	28	46,577	15	26,625
11 - 15	69	49,229	27	39,747	6	33,811	12	62,871	8	55,655	5	28,705
16 - 20	41	54,189	11	37,181			8	64,152	9	57,655		
21+	19	51,499				*						
Overall	330	49,429	388	38,276	473	31,104	69	62,849	89	47,148	59	26,549

*Data not submitted. NOTE: Totals do not add because all faculty did not report years in rank. Blanks indicate insufficient data reported.

SOURCE: American Assembly of Collegiate Schools of Business, 1984-85 Salary Survey, December 1984.

TABLE 207

MEAN SALARIES OF BUSINESS FACULTY BY DISCIPLINE/FIELD AND RANK, 1984-85

DISCIPLINE/FIELD	Professor		Assoc. Professor		Ass't. Professor		Instructor		New Doctorate		ABD	
	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean
Accounting	1,011	$44,300	1,139	$36,400	1,310	$31,200	656	$22,500	64	$33,200	74	$32,700
Economics	806	42,200	703	32,800	722	27,400	176	21,600	42	27,700	45	25,200
Finance	736	45,000	635	36,500	751	32,600	157	23,400	57	34,600	55	30,400
Management	695	42,200	696	33,700	634	29,200	295	22,000	32	30,900	34	29,200
Marketing	665	43,500	600	35,500	753	30,800	266	22,300	42	33,100	65	30,400
Quantitative Methods	394	44,100	375	34,900	371	30,600	142	21,500	28	31,400	16	28,100
Business Education	158	35,300	158	29,200	159	24,600	72	19,500	4	25,500	3	22,600
Business Law	156	39,300	248	31,600	307	26,500	39	21,000	6	25,600	16	23,800
Data Processing/Info. Systems	211	41,400	329	35,200	390	30,500	237	22,200	26	33,400	18	30,700
Production/Operations Management Managerial Econmics	164	46,500	165	37,100	161	32,800	28	23,300	19	33,700	15	31,400
Behavioral Science/ Organizational Behavior	207	48,400	193	36,500	221	32,000	22	23,500	8	30,500	15	30,000
International Business	61	47,700	38	37,900	31	33,600	10	27,700	1	34,000	5	32,000
Personnel	128	43,600	98	35,300	87	31,000	15	20,200	3	30,000	5	30,800
Policy/Control	129	48,800	91	36,200	115	32,900	12	27,500	5	35,000	9	30,500
Other	178	41,200	167	33,500	153	27,400	53	22,800	2	30,500	4	28,200
All Combined	**5,699**	**43,500**	**5,635**	**34,900**	**6,165**	**30,200**	**2,180**	**22,200**	**339**	**32,100**	**379**	**29,700**

SOURCE: American Assembly of Collegiate Schools of Business, 1984-85 Salary Survey, December 1984.

TABLE 208

MEAN SALARIES OF ADMINISTRATIVE PERSONNEL IN BUSINESS SCHOOLS BY TYPE OF INSTITUTION AND ADMINISTRATIVE POSITION, 1984-85

ADMINISTRATIVE POSITION	PUBLIC		PRIVATE		ACCREDITED		NONACCREDITED		ALL COMBINED	
	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean	Number Reporting	Mean
Dean	264	$58,100	127	$59,000	206	$64,700	185	$51,300	391	$58,400
Associate Dean	172	52,200	89	49,500	203	53,700	58	42,700	261	51,300
Assistant Dean	134	40,000	78	34,800	140	40,000	72	34,400	212	38,100
Academic Dept. Chairman	822	46,900	277	42,700	733	49,600	366	38,400	1,099	45,900
Director of U.G. Programs	42	38,200	16	36,300	49	38,800	9	31,200	58	37,700
Director of Grad. Programs	85	41,000	37	36,000	81	41,800	41	34,900	122	39,500
Director of Placement	16	35,900	20	34,600	30	35,300	6	34,600	36	35,200
Director of Co-op Programs	6	28,500	5	29,200	5	28,400	6	29,100	11	28,800
Director of Exec. Development	44	45,300	29	45,400	57	48,200	16	35,100	73	45,400
Director of Internship	9	28,800	5	24,800	6	26,000	8	28,500	14	27,400
Director of Research	58	44,400	9	47,500	49	47,200	18	38,400	67	44,800
Other	173	35,300	97	38,200	156	39,100	114	32,400	270	36,300

TABLE 209

MEAN ANNUAL SALARIES OF BUSINESS SCHOOL FACULTY BY RANK AND SEX, 1984-85

RANK	TOTAL FACULTY		WOMEN FACULTY	
	Number Reporting	Mean Salary	Number Reporting	Mean Salary
Professor	5,699	$43,500	276	$37,600
Associate Professor	5,635	34,900	571	32,400
Assistant Professor	6,165	30,200	1,381	28,800
Instructor	2,180	22,200	855	20,900
New Doctorate	339	32,100	75	31,200
ABD	379	29,700	113	28,900

SOURCE: College and University Personnel Association, 1984-85 Administrative Compensation Survey, March 1985.

TABLE 210

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1984-85

POSITION	ALL INSTITUTIONS		MEDIAN SALARY	
	Number	Salary	Public	Private
Chief Executive Officer, System	156	$70,700	$70,395	$78,500
Chief Executive Officer, Single Institution	1,379	61,500	62,000	60,769
Executive Vice President	311	52,518	52,518	52,000
Chief Academic Officer	1,392	48,550	51,914	43,800
Chief Business Officer	1,407	45,890	48,231	41,500
Chief Student Affairs Officer	1,358	40,400	44,480	34,000
Chief Development Officer	789	41,791	42,837	40,000
Chief Public Relations Officer	729	30,970	34,763	28,000
Chief Planning Officer	241	44,000	44,436	40,082
Chief Personnel/Human Resources	675	35,300	38,500	30,940
Chief Health Professions Officer	106	68,990	66,676	69,200
Chief Budgeting Officer	420	39,000	39,700	37,750
General Counsel	190	49,050	48,130	51,500
Registrar	1,138	29,352	33,324	25,000
Director, Church Relations			28,583	25,000
Director, Learning Resources Center	574	30,904	34,000	23,466
Director, Library Services	1,172	33,779	38,373	28,400
Director, Computer Center	881	36,069	38,420	31,500
Director, Computer Center Operations/Academic	310	35,020	37,796	32,400
Director, Computer Center Operations/Administrative	326	35,000	37,787	30,660
Director, Educational Media Services	503	27,927	30,663	22,200
Director, Institutional Research	505	33,757	35,394	28,000
Director, Special & Deferred Gifts	254	32,004	35,000	31,600
Administrator, Grants & Contracts	428	36,816	39,024	31,524
Director, Affirmative Action/Equal Employment	309	35,000	35,000	33,600
Chaplain	295	24,539		24,485
Comptroller	828	36,043	39,000	31,906
Director, Accounting	542	29,060	32,276	24,400
Director, Internal Audit	320	33,742	33,875	32,500
Bursar	343	26,475	28,643	24,486
Director, Food Services	385	29,300	30,144	27,200
Director, Physical Plant/Facilities Management Officer	1,210	34,000	36,781	30,000
Director, Student Activities	759	25,600	28,767	20,000
Director, Purchasing	747	28,032	29,364	24,300
Director, Bookstore	899	21,000	23,800	16,979
Director, Campus Security	813	26,000	28,574	22,325
Director, Information Systems	211	41,366	41,575	40,000
Director, News Bureau	290	24,350	27,100	21,000
Director, Auxiliary Services	323	35,993	37,295	32,280
Director, Admissions	968	31,746	33,147	30,325
Director, Foreign Students	226	26,308	28,788	24,000
Director, International Studies Education	142	34,427		28,650
Director, Student Financial Aid	1,290	27,500	30,450	23,980
Director, Student Placement	883	26,994	30,050	23,485
Director, Student Counseling	851	31,825	34,435	27,000

SOURCE: College and University Personnel Association, 1984-85 Administrative Compensation Survey, March 1985.

TABLE 210 (continued)

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1984-85

POSITION	ALL INSTITUTIONS		MEDIAN SALARY	
	Number	Salary	Public	Private
Director, Student Union	358	$30,000	$32,336	$23,644
Director, Studen Health Services (Physician Admin.)	280	56,531	58,045	50,000
Director, Student Health Services (Nurse Admin.)	523	21,300	24,416	19,250
Director, Student Housing	615	24,690	29,540	20,200
Director, Athletics	851	36,260	39,333	32,000
Director, Campus Recreation/Intermurals	373	25,390	27,047	20,970
Director, Alumni Affairs	708	25,845	29,400	22,680
Director, Information Office	408	27,703	29,824	23,730
Director, Community Services	279	33,000	33,436	23,000
Administrator, Hospital Medical Center	44	80,000	80,000	57,500
Director, Publications	336	27,074	29,485	24,100
Director, Risk Management & Insurance	94	34,440	34,950	28,500
Chief Planning & Budget Officer	95	46,900	46,968	44,545
Chief Development & Public Relations Officer	209	46,200	46,200	46,000
Director, Personnel & Affirmative Action	244	30,528	31,452	28,323
Director, Admissions & Financial Aid	148	35,460	34,244	35,637
Director, Development & Alumni Affairs	101	35,831	37,820	28,000
Director, Admissions & Registrar	223	36,583	37,500	27,000
Dean, Architecture	65	60,200	60,000	
Dean, Agriculture	86	58,810	58,810	
Dean, Arts and Letters	104	47,033	47,033	47,250
Dean, Arts and Sciences	401	51,000	51,213	50,000
Dean, Business	641	48,740	48,984	48,000
Dean, Communications	89	43,910	44,678	36,667
Dean, Continuing Education	580	39,478	41,321	34,140
Dean, Dentistry	53	80,942	78,000	84,579
Dean, Education	424	48,500	51,000	37,400
Dean, Engineering	245	60,700	58,200	64,800
Dean, Experimental Programs				30,000
Dean, Extension	86	45,944	46,051	
Dean, Fine Arts	187	47,000	48,364	36,464
Dean, Graduate Programs	343	52,500	53,800	43,000
Dean, Health Related Professions	204	44,000	45,629	33,582
Dean, Home Economics			53,164	33,760
Dean, Humanities	215	39,000	42,930	30,958
Dean, Instruction			41,300	
Dean, Law	134	77,850	76,730	78,650
Dean, Library & Information Sciences	66	48,150	48,924	41,891
Dean, Mathematics	104	38,250	40,016	32,760
Dean, Medicine	77	99,953	96,408	125,000
Dean, Music	80	45,000	54,960	38,052
Dean, Nursing	316	43,200	45,150	39,000
Dean, Occupational Studies/Voc. E[illegible]/Technology	243	40,850	40,900	
Dean, Pharmacy	56	62,800	64,700	
Dean, Sciences	272	42,930	45,000	34,250
Dean, Social Sciences	212	40,084	41,500	31,636
Dean, Social Work	77	55,300	56,500	39,793
Dean, Special programs			36,070	30,996
Dean, Undergraduate Programs	89	44,958	45,936	41,125

SOURCE: College and University Personnel Association, 1984-85 Administrative Compensation Survey, March, 1985

TABLE 211

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION, MINORITY/NON-MINORITY STATUS AND SEX, 1984-85

POSITION	Non-Minority		Minority		Men		Women	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Chief, Executive Officer, System	145	$71,070	6	$58,210	144	$71,300	8	$58,010
Chief Executive Officer, Single Institution	1,257	62,354	91	56,964	1,247	62,370	108	55,000
Executive Vice President	285	53,300	20	42,844	286	53,240	21	46,336
Chief Academic Officer	1,259	49,088	84	47,675	1,170	49,700	182	42,533
Chief Business Officer	1,286	46,350	82	40,000	1,270	46,900	107	33,600
Chief Student Affairs Officer	1,151	40,280	158	42,600	1,041	41,500	276	34,908
Chief Development Officer	725	42,294	33	34,008	620	43,500	147	34,740
Chief Public Relations Officer	659	31,200	40	30,689	415	35,640	287	25,500
Chief Planning Officer	214	44,400	19	38,500	192	44,635	43	42,024
Director, Personnel/Human Resources	590	36,000	66	33,495	420	39,610	238	30,000
Chief Health Professions Officer	99	69,760	5	42,630	81	81,840	23	39,670
Chief Budgeting Officer	380	40,000	31	33,600	337	41,356	76	33,708
General Counsel	174	48,880	11	49,834	144	49,268	42	48,348
Registrar	1,028	29,578	75	27,847	649	33,800	461	24,150
Director, Learning Resources Center	499	31,200	50	30,224	323	34,562	229	26,550
Director, Library Services	1,053	34,101	75	31,782	685	36,774	452	29,000
Director, Computer Center	815	36,500	46	33,416	782	37,210	84	27,192
Director, Computer Center Operations/ Academic	289	35,815	15	22,359	257	37,108	47	26,832
Director, Computer Center Operations/ Administrative	299	35,020	19	30,870	252	36,580	66	26,220
Director, Educational Media Services	453	28,409	39	24,994	400	29,897	95	19,950
Director, Institutional Research	452	34,036	37	32,004	319	36,553	172	37,853
Director, Special & Deferred Gifts	239	32,875	5	24,200	190	34,573	58	28,500
Administrator, Grants & Contracts	389	37,000	25	33,093	276	41,120	138	27,500
Director, Affirmative Action/ Equal Employment	146	32,694	154	36,395	109	36,700	190	34,000
Chaplain	269	24,535	16	23,554	251	25,185	37	19,000
Comptroller	768	36,668	40	34,050	626	38,570	184	26,850
Director, Accounting	476	29,401	51	26,000	336	33,500	194	23,000
Director, Internal Audit	277	33,843	31	32,921	239	35,460	70	27,888
Bursar	309	26,475	27	26,500	177	32,200	159	22,000
Director, Food Services	352	29,500	22	21,700	256	31,380	121	23,350
Chief Physical Plant/ Facilities Management Officier	1,099	34,693	70	30,500	1,158	34,500	17	24,610
Director, Student Activities	624	25,818	103	25,100	436	27,950	293	21,980
Director, Purchasing	678	28,369	47	21,2[illegible]	532	30,428	198	21,500
Director, Bookstore	824	21,180	49	18,886	432	26,345	447	16,979
Director, Campus Security	679	26,292	110	25,452	774	26,032	19	25,257
Director, Information Systems					172	43,156	34	29,619
Director, News Bureau	269	24,823	10	22,823	135	26,748	147	22,000
Director, Auxiliary Services	296	36,296	19	27,540	270	37,600	45	25,200
Director, Admissions	858	32,000	69	29,065	703	33,351	231	27,563
Director, Foreign Students	183	26,640	37	24,976	126	28,644	95	23,677
Director, International Studies Education	129	34,427	10	31,[illegible]36	93	40,367	47	27,000
Director, Student Financial Aid	1,075	27,450	186	28,483	777	30,450	494	23,377
Director, Student Placement	781	27,000	73	26,890	481	30,168	378	23,108
Director, Student Counseling	733	32,297	90	28,840	528	34,000	302	27,960
Director, Student Union	321	20,175	31	29,317	282	31,200	69	25,920
Director, Student Health Services (Physician Admin.)	252	57,860	21	42,116	214	58,000	61	55,065

SOURCE: College and University Personnel Association, 1984-85 Administrative Compensation Survey, March 1985

TABLE 211 (continued)

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION, MINORITY/NON-MINORITY STATUS AND SEX, 1984-85

POSITION	Non-Minority		Minority		Men		Women	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Director, Student Health Services (Nurse Admin.)	472	$21,333	36	$18,550	10	$27,030	502	$21,200
Director, Student Housing	550	25,000	51	23,154	364	28,250	241	20,000
Director, Athletics	782	36,837	51	33,818	786	37,200	49	25,000
Director, Campus Recreation/ Intermurals	328	25,410	38	21,228	299	25,591	69	22,613
Director, Alumni Affairs	652	26,000	35	26,436	268	30,000	323	21,230
Director, Information Office	378	27,936	15	27,456	217	30,888	180	24,411
Director, Community Services	237	32,480	34	36,443	154	35,500	117	28,735
Director, Publications	319	27,120	9	28,620	162	30,007	166	24,100
Director, Risk Management and Insurance					74	35,300	19	30,430
Chief Planning & Budget Officer	86	48,672	7	34,200	85	48,672	8	26,570
Chief Development & Public Relations Officer	193	47,200	11	37,063	163	48,550	41	33,280
Director, Personnel & Affirmative Action	192	30,000	48	33,708	126	33,928	114	25,290
Director, Admissions & Financial Aid	136	35,900	7	24,043	112	37,590	32	28,000
Director, Housing & Food Services					39	43,594	9	30,584
Director, Development & Alumni Affairs					71	38,000	26	26,000
Director, Admissions & Registrar	191	37,500	21	31,980	162	38,354	52	29,000
Dean, Agriculture	75	59,533	9	42,336				
Dean, Arts and Letters	92	47,033	10	45,114	87	47,531	15	37,257
Dean, Arts and Sciences	366	51,750	28	45,156	344	52,408	52	41,870
Dean, Business	580	49,647	39	42,128	549	51,000	74	38,094
Dean, Communications					69	45,300	17	44,678
Dean, Continuing Education	526	39,790	37	39,425	430	42,265	137	32,663
Dean, Education	369	49,325	43	44,652	328	50,592	85	40,825
Dean, Engineering	223	60,700	14	51,000				
Dean, Experimental Programs					15	44,748	5	30,000
Dean, Extension	75	46,051	6	44,652	70	47,000	12	35,404
Dean, Fine Arts	173	47,000	11	47,500	163	47,500	21	40,084
Dean, Graduate Programs	322	52,533	17	52,721	285	53,900	54	47,067
Dean, Health Related Professions	181	44,000	19	50,375	111	49,494	89	41,000
Dean, Home Economics					13	54,600	49	50,894
Dean, Humanities	183	39,483	19	31,764	155	40,982	49	37,088
Dean, Instruction	40	40,688	7	30,000	37	41,121	10	33,919
Dean, Law	126	78,000	5	70,000	125	78,000	6	71,073
Dean, Library & Information Sciences	57	48,864	8	45,500	42	50,004	23	43,500
Dean, Mathematics	89	39,922	12	30,000	88	39,922	14	32,204
Dean, Music	71	47,700	6	38,052	71	45,174	6	38,052
Dean, Nursing	281	43,500	29	42,453	6	48,072	304	43,380
Dean, Occupational Studies/ Voc. Educ./Technology	207	41,100	16	39,938	199	41,318	23	36,000
Dean, Sciences	230	43,798	32	37,538	228	44,480	35	36,648
Dean, Social Sciences	175	40,906	26	30,529	165	40,652	39	39,695
Dean, Social Work	48	55,700	24	54,000	49	55,700	24	50,239
Dean, Special Programs	73	34,100	27	36,886	63	33,628	36	36,070
Dean, Undergraduate Programs					63	47,500	25	40,300

SOURCE: National Education Association, Estimates of School Statistics 1984-85, March 1985

TABLE 212

ESTIMATED AVERAGE ANNUAL SALARIES OF ELEMENTARY AND SECONDARY INSTRUCTIONAL STAFF AND PUBLIC SCHOOL CLASSROOM TEACHERS BY STATE, 1984-85

STATE	Instructional Staff	CLASSROOM TEACHERS			% Increase 1983-84
		Elementary School	Secondary School	All Teachers	
United States	**$24,569**	**$23,092**	**$24,276**	**$23,546**	**7.3**
Alabama	21,063	20,176	20,409	20,204	14.3
Alaska	41,000	39,520	39,900	39,751	5.1
Arizona	25,838	23,247	23,683	23,380	8.0
Arkansas	20,834	20,209	20,209	20,209	11.8
California	27,580	26,170	27,890	26,300	5.9
Colorado	25,382	24,150	24,800	24,456	5.1
Connecticut	25,650	24,250	24,940	24,520	8.4
Delaware	24,134	22,712	23,788	23,300	11.3
District of Columbia	29,770	28,582	28,679	28,621	3.5
Florida	22,480	21,442	20,569	21,057	8.0
Georgia	21,407	21,370	20,960	20,494	10.0
Hawaii	25,295	24,628	24,628	24,628	1.1
Idaho	20,420	18,970	20,500	19,700	9.5
Illinois	26,703	24,759	27,842	25,829	6.8
Indiana	23,882	22,652	23,544	23,089	7.2
Iowa	21,686	20,135	21,629	20,934	3.9
Kansas	22,564	21,110	21,290	21,208	9.5
Kentucky	21,300	20,095	21,110	21,100	2.2
Louisiana	20,110	19,400	21,210	19,690	7.0
Maine	18,935	17,849	19,238	18,329	5.8
Maryland	26,782	24,742	26,265	25,861	7.3
Massachusetts	28,000	23,835	24,350	24,110	5.0
Michigan	29,610	28,191	28,700	28,401	5.0
Minnesota	26,500	24,970	26,790	25,920	6.4
Mississippi	16,519	15,710	16,280	15,971	1.0
Missouri	21,362	19,824	21,084	20,452	5.9
Montana	22,440	21,110	22,830	21,750	4.9
Nebraska	21,529	19,292	21,008	20,153	7.3
Nevada	23,550	22,110	22,960	22,520	0.7
New Hampshire	19,276	18,638	18,505	18,577	6.9
New Jersey	26,310	24,596	25,732	25,125	8.0
New Mexico	23,240	21,340	22,770	22,064	7.3
New York	29,700	28,500	30,000	29,000	6.2
North Carolina	21,357	20,620	20,788	20,691	13.0
North Dakota	20,480	19,610	20,340	19,900	3.3
Ohio	23,682	22,183	23,383	22,737	6.8
Oklahoma	19,520	12,380	19,490	18,930	1.9
Oregon	25,974	24,358	25,822	24,889	7.5
Pennsylvania	25,113	24,289	24,561	24,435	7.6
Rhode Island	25,253	27,497	28,075	27,384	8.1
South Carolina	20,770	19,206	20,592	19,800	13.9
South Dakota	18,048	17,300	17,450	17,356	5.3
Tennessee	20,450	20,020	20,180	20,080	12.1
Texas	23,500	21,965	23,390	22,600	12.0
Utah	24,475	20,700	22,388	21,307	6.5
Vermont	19,640	18,539	19,407	19,014	8.0
Virginia	22,400	20,767	22,535	21,536	9.5
Washington	26,727	25,221	26,056	25,610	5.1
West Virginia	20,451	19,530	19,603	19,563	11.9
Wisconsin	25,160	24,190	25,190	24,780	8.6
Wyoming	26,935	26,172	27,817	26,709	6.0

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